



the courier

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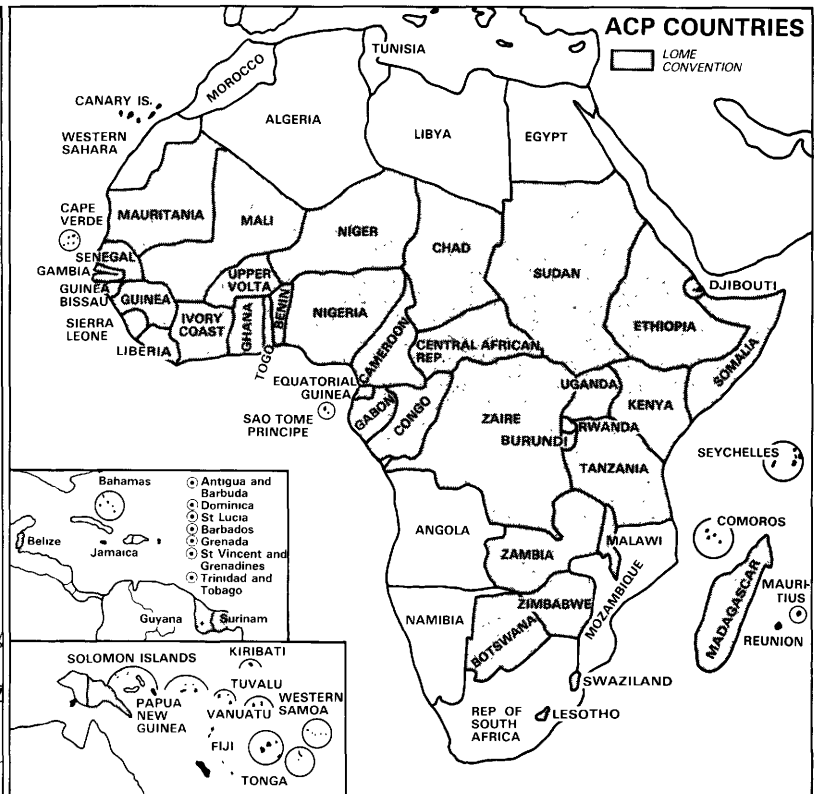
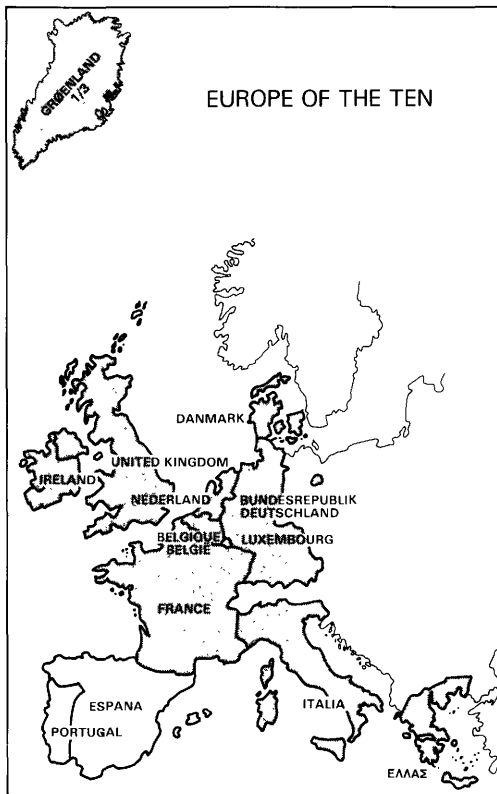
**TROPICAL
FORESTRY**

THE EUROPEAN COMMUNITY

BELGIUM
DENMARK
FRANCE
GERMANY
(Federal Rep.)
GREECE
IRELAND
ITALY
LUXEMBOURG
NETHERLANDS
UNITED KINGDOM

THE ACP STATES

ANTIGUA AND BARBUDA	GRENADA	SENEGAL
BAHAMAS	GUINEA	SEYCHELLES
BARBADOS	GUINEA BISSAU	SIERRA LEONE
BELIZE	GUYANA	SOLOMON ISLANDS
BENIN	IVORY COAST	SOMALIA
BOTSWANA	JAMAICA	SUDAN
BURUNDI	KENYA	SURINAM
CAMEROON	KIRIBATI	SWAZILAND
CAPE VERDE	LESOTHO	TANZANIA
CENTRAL AFRICAN REPUBLIC	LIBERIA	TOGO
CHAD	MADAGASCAR	TONGA
COMOROS	MALAWI	TRINIDAD & TOBAGO
CONGO	MALI	TUVALU
DJIBOUTI	MAURITANIA	UGANDA
DOMINICA	MAURITIUS	UPPER VOLTA
EQUATORIAL GUINEA	NIGER	WESTERN SAMOA
ETHIOPIA	NIGERIA	VANUATU
FIJI	PAPUA NEW GUINEA	ZAIRE
GABON	RWANDA	ZAMBIA
GAMBIA	ST. LUCIA	ZIMBABWE
GHANA	ST. VINCENT & GRENADINES	
	SAO TOME PRINCIPE	



FRANCE

(Overseas departments)

Guadeloupe
Guiana
Martinique
Reunion
St Pierre and Miquelon

(Overseas territories)

Mayotte
New Caledonia and dependencies
French Polynesia
French Southern and Antarctic Territories
Wallis and Futuna Islands

NETHERLANDS

(Overseas countries)

Netherlands Antilles
(Aruba, Bonaire, Curaçao, St Martin, Saba,
St Eustatius)

UNITED KINGDOM

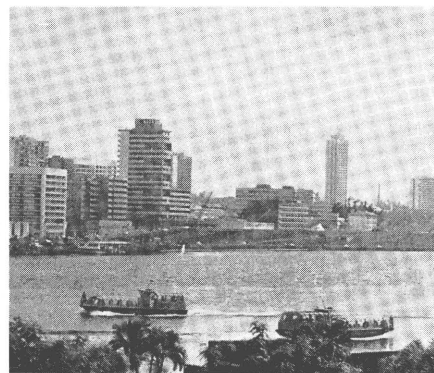
(Overseas countries and territories)

Anguilla
British Antarctic Territory
British Indian Ocean Territory
British Virgin Islands
Brunei
Cayman Islands
Falkland Islands and dependencies
Montserrat
Pitcairn Island
St Helena and dependencies
St Kitts & Nevis

This list does not prejudice the status of these countries and territories now or in the future.

Cover: The Central Africa Republic can produce more than 500 000 m³ of timber annually; although little is needed to build the country's traditional clay houses, plenty is available for building wooden or timber-and-cement houses in future (FAO photo)

ACCT — The *Agence de coopération culturelle et technique* has carried out a number of major cultural and technical projects since its creation some 12 years ago, aimed at bringing together its member countries, all French-speaking, throughout the world. The ACCT's new secretary-general, François Owono-Nguéma of Gabon, describes the new prospects open to the agency now that its international presence is firmly established. "Complementarity" and "solidarity" among its members are the key words. **Page 8**



Ivory Coast — Since its independence in 1960, the Ivory Coast has seemed the only West African state to have achieved real economic development despite serious structural difficulties at the outset. International economic problems and the fall in commodity prices have checked this development, but the slow-down should only be a temporary "growth crisis" due to the short-term situation. In the longer run, the discovery of oil and the new impetus given to farming should pull the economy through. **Page 10**

Europe — In the six months since his election as President of the European Parliament, Pieter Dankert has developed his own, somewhat austere, style as a European figure. His main concern is to see the Parliament taking up the political and institutional role to which it is entitled by virtue of the first direct European elections in June 1979. In order to get the Community moving forward again, he has suggested holding a new Messina conference to ascertain what kind of Europe the EEC countries want. Mr Dankert explains his thinking and gives an initial commentary on the Lomé policy. **Page 34**



Dossier — What is happening to the tropical forests of the world? In view of their accelerating destruction, this has become an urgent question. The reduction of tree cover has many consequences, both economic and ecological. Our dossier takes a look at the trends in tropical forestry and the research that could help save forests, which are of fundamental importance to the communities they support, by bringing a more scientific approach to the tropical timber industry. **Page 40**

The arts — There is a considerable body of ACP works of art in Europe, even if it takes a visit to a museum or exhibition to be reminded of them. They are of great interest to their countries of origin; are they appreciated away from home? Artefacts from ACP cultures in the British Museum are certainly regarded with close interest by European visitors who are prepared to value the art and traditions of all the world's civilizations, as the keeper of the Museum of Mankind explains. **Page 83**



THE COURIER

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— EUROPEAN COMMUNITY

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Zimbabwe: Prime Minister Robert Mugabe visits the Commission

The future of the tropical forests

One of the reports published as part of UNESCO's Man and the Biosphere (MAB) programme describes a tropical forest as an insurmountable barrier, a wall of vegetation rising 40 m into the morning mist. The bigger tracks cut trenches and deep corridors through the trees and the smaller ones dig tunnels through the greenery. Visibility is only 20 m. Here and there, monstrous trunks with tentacle-like roots push skywards through the foliage, their tips almost invisible. The undergrowth may not be thick, but it is difficult to walk at a normal pace in the mass of dead wood and fallen trees, and the slightest path is soon overgrown with new, tangled plant life.

This tropical forest, where germination is intense, gives the impression of enormous power. But it is often in danger today. The experts say that an area the size of the UK is destroyed every year and, at this rate, half the tropical and the sparser savanna forests will be gone by the year 2000. So says the joint FAO-UNEP (UN Environmental Programme) report published recently, revealing that at least 5000 ha of forest a day disappears from Asia and the Pacific and that 9 million ha was lost in this way in 1976-80. According to estimates, a quarter of our planet was covered with forests 30 years ago and today, although the developing countries still have 1 800 million ha of forest, almost half the trees have gone. Obviously, excessive felling has disastrous effects—erosion, desertification and climatic changes among them—with the human consequences that we know only too well. How has all this happened?

Among the many causes, old and new, are the population explosion, the extension of arable land, the practice of growing crops on burnt land, drought in some places, exaggerated felling, high oil prices and the use of firewood.

This last point is a particularly good example of the problem. In 1981, the director of the

FAO sounded the alarm in Nairobi at the UN conference on new and renewable energy. If nothing is done, he said, 2 000 million people will have a fuel crisis on their hands come the year 2000. This is a serious problem that has not been much discussed so far. One third of the world population, or around 1500 million people in the Third World today, use firewood for cooking and heating. In these countries, 90% of the wood cut is used for fuel. Certainly Europe had its firewood shortage at the end of the 18th century, before the industrial revolution brought new sources of energy into our daily lives. But the problem is altogether bigger this time and an IBRD assessment suggests that the Third World should be planting 50 million ha of trees by the year 2000 if it wants to have enough wood to burn. But there is no point in telling people not to cut down trees if there is nothing else they can do and if they already cook only one meal a day.

The Nairobi conference aimed to increase the present rate of reforestation fivefold. But it would cost more than a million dollars a year to plant only 20 million ha of trees over the next 20 years.

Reforestation is essential but expensive. There are other ways of halting the destruction of tree cover and saving forests at risk. One, as encouraged by the Community, is to make the local people concerned more aware of the dangers of this kind of damage and more economical in their use of wood. Such changes of attitude can be better brought about by accompanying information campaigns with the rapid development of new, adapted forms of energy, such as solar and wind power, or by introducing small stoves that use less charcoal. These are among the approaches the EEC intends to promote, as commissioner Pisani has often stressed, in helping the ACP countries to renew their disappearing forests. ◦

ALAIN LACROIX

Environment

10 years of cleaning the world

An interview with UNEP executive director Dr Mostafa Tolba

Ten years ago, representatives of 113 nations gathered in Stockholm at the UN Conference on the Human Environment. Under the slogan "Only one earth" they adopted a declaration ("of all things in the world, people are the most precious..."), 26 environmental principles and 109 recommendations moulded into an action plan, "a strategy for survival".

At the outset of the '70s, the Club of Rome's *Limits to Growth* was the culmination of the growing environmental concern which had developed throughout the '60s, as it clearly laid out the threat of major resources-environment collapse if trends continued as they were.

The conference raised the debate on the environment to its real level in putting it into a context far wider than wildlife conservation: in the end, to quote a Chinese delegate at the conference, "poverty is the worst form of pollution". It created the United Nations Environment Programme (UNEP), intended to implement the environmental action plan drawn up at Stockholm.

UNEP itself is not responsible for the world's environment, nor is it a classic UN executive agency. It should be regarded as the UN's "environmental conscience", meant as a catalyst in the coordination of the environmental activities of UN agencies, other international bodies and national authorities.

In this interview, UNEP executive director Dr Mostafa Tolba reviews progress, and lack of it, over the years since the Stockholm conference.

Not a matter of profit but of life itself

► *Dr Tolba, in 1982 a decade will have passed since the 1972 Stockholm UN Conference on the Human Environment. What has and what has not been achieved since then?*

— If we look at the different components of the environment and compare the achievements with the objectives, I think we can say a good deal has been done. If you look at the atmosphere, for example, everybody was worried about the air pollution. One can certainly say that a good many protective measures have been developed during these 10 years and led—at least in the industrialized countries—to an understanding of the ways and means by which you reduce air pollution. The basic elements that were worrying everybody were the sulphur oxides and

the nitrogen oxides which lead to acid rains. I wouldn't dare say we have resolved the danger of acid rains, but there is certainly a reduction in the emission of these two groups of gases.

The other pollutant that came to attention after the Stockholm conference is carbon dioxide. Everybody started worrying about the build-up of carbon dioxide in the atmosphere due to the use of fossil fuels, particularly oil and gas. Unfortunately, the energy situation and the increased price of oil is pushing everybody towards the use of coal, tar sand and oil shales. These are more heavily loaded with carbon dioxide than oil, which itself is, of course, more loaded than gas. I imagine this problem will continue throughout the next decade, if not get worse. In 1980, we came to the first preliminary assessment of the state of carbon dioxide:



Dr Mostafa Tolba
Executive director of the United Nations Environment Programme

what was the state of concentration, where does this carbon dioxide build-up go, what goes into the ocean, what goes into vegetation and so on. It is a basic assessment of what happened in the past 10 years and on which we will build in the future when further assessments will show where we are going, and what we should do about it.

Another issue that has come up during the decade is the ozone layer. Again, a first assessment took place about four years ago, to look into the likelihood of a reduction in the ozone layer and consequently an increase in ultra-violet radiation, which can lead to skin cancer. The basic cause of the depletion of the ozone layer turned out to be the chlorofluorocarbons which are used, for instance, in sprays and in refrigeration. Immediately the industries started cutting down on their production of chlorofluorocarbons, and without any pressure from their governments because it's not a matter of profit, it is a matter of human life. There were also fears about supersonic jets like the Concorde being brought into service, because of their possible impact on this ozone layer. Luckily, our fears did not materialize for the simple reason that these supersonic jets were not produced in the numbers expected.

Ecosystems: the breaking-point

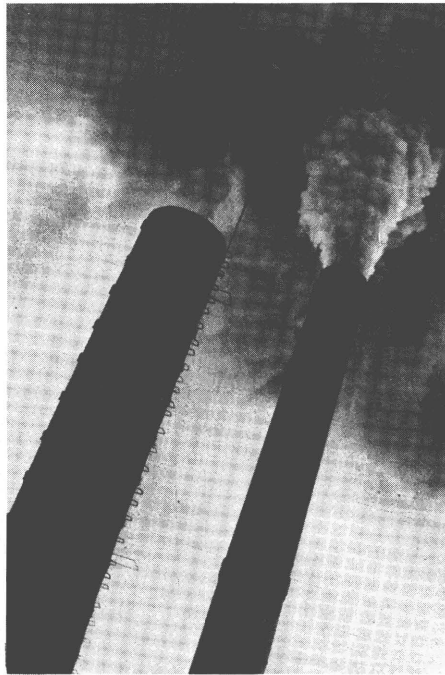
Another area where a good deal of work has been done is inland waters. To illustrate the cleaning of some of the most polluted rivers and lakes, the



WHO

Providing everybody with clean drinking water is still a long task; by 1980, a quarter of the urban population and 71% of the rural population of the developing countries lacked reasonable access to fresh water

Thames is a good example: completely dead in 1972, with not a single fish living in it, this river has been cleaned up and now has a tremendous and continuously growing number of living biological organisms. In the Soviet Union, Lake Baikal is another example. On the negative side, we started using large amounts of agrochemicals, chemical fertilizers and pesticides. These go through the irrigation canals into the water, constituting large amounts of toxicity to human beings and making the utilization of the water difficult. You cannot use it for irrigation, and you cannot use it for industry without a cleaning process which is very costly. But you still need that increased amount of agrochemicals to produce more food, so it is a chicken-and-egg situation. We have started to realize in the decade since Stockholm that there are elements which we were not quite aware of, and one of them is this interconnection which implies that, whatever you do in any type of ecosystem in which we live, it is not an isolated exercise. It has an impact on other components of the ecosystem and even on other ecosystems. The interaction between people—resources—environment—development has become a basic question in the thinking of the United Nations and we are all trying to learn more about this inter-relationship, not in terms of theory but through practical case studies. What happened, for example, in the Sudano-Sahelian zone with the drought; what happens



UNEP

The carbon dioxide concentration in the atmosphere is increasing, through continued burning of fossil fuels, and leads to climatic change

in the foothills of the Himalayas, with the destruction of the forest there? We came to realize that ecosystems such as arid lands or forests can stand a certain amount of pressure—even tremendous amount of pressure—but the minute you reach the limit of what we call the resilience, their ability to resist, they break completely, and this can be irrecoverable. We have come to the concept of outer limits: there is a limit to what any of the ecosystems on earth can stand. Therefore, whenever we make a process of development, we have to be careful not to reach this outer limit or we risk losing the whole ecosystem involved.

All these new ideas and new concepts have developed over the past 10 years, and this I certainly consider one of the major achievements of the whole exercise of the environment programme. There have been other factors of progress like the governmental concern for the environment which is reflected in the creation of a large number of environmental machineries, whether ministries, departments or councils, and the explosion in environmental legislation through the establishment of standards for the quality of air and water, the establishment of criteria for assessing the toxicity of chemical substances, etc.

Environmental education

Furthermore, before 1972 there was never even talk of environmental edu-

cation; as of 1974 we established with UNESCO a global programme on environmental education. We had a first worldwide conference on environmental education which sketched out how boys and girls in primary school would start getting some understanding of how to protect the environment in which they live, and this up to the level of post-graduate studies. There has been a series of training courses, workshops and conferences attended by people from the developing countries to increase their capacity to deal with the environmental problems at the national level.

Finally, the Stockholm conference also had its effects on the establishment of a whole series of action plans which were developed later. The population action plan, the World Food Conference, the agricultural reform conference, the International Fund for Agricultural Development, the water plan of action, the desertification plan of action, all these and forthcoming activities like a plan of action to control soil degradation, a plan of action for marine animals and one for the ozone layers, go back to the 1972 environment conference.

Spreading the word: a long way to go

► *All this is fairly positive. What else might have been done?*

— We know there are things which did not happen, for several reasons: failure on our side as a unit to do our job properly, failure on the side of governments to cooperate with us in certain areas, the impatience of governments for getting results. Let me give you examples of our own failure. I don't know what is the reason, but I certainly feel that we ourselves are to blame for the fact that the message of the environment has not, as I hoped, reached down to the grassroots. I don't think have we had enough impact in the media, whether television, radio or newspapers, to attract wide public attention. We may have been successful in certain areas but we failed in passing on our message to people at large. I don't think that we managed to cover the whole spectrum of the environment, nor what we as UNEP and the environmental movement in the world have been doing, to ensure that everybody feels they have a stake in protecting the environment. I feel disappointed about this, yet I know that this is a very difficult job. It's not easy to convince reporters and editors of the importance of the environment. There is nothing in what we are doing that is actually newsworthy; we can hardly at-

tract the headlines. Our activities are long-term and their results can't be appreciated as they are being carried out. This is a problem we have to handle in the next decade.

National touchiness, international concern

Another element is the sensitivity of governments when it comes to issues relating to their sovereignty. We had this experience with environmental law and guidelines, for instance in cases when a resource is shared by two or more states, like a border river or a shared forest. We have been working with governments and experts nominated by governments for two and a half years to produce guidelines and principles; these were accepted by a large number of the governments and by our governing council, but when it came to the General Assembly of the United Nations, certain governments started to move away from committing themselves and simply took note of these principles. The recommendations said that they should be taken into account in bilateral negotiations. The same applies to weather modification, and how countries should take into account the weather modification impact on other countries. When the issue is there, everybody's willing to consider it, but when you come to concrete recommendations, it becomes a hot potato. This is a problem which we have to live with. There are things which are considered sensitive as far as information is concerned, like radioactive releases into the atmosphere. The Stockholm conference asked for a directory or an inventory of these, but we have not been able to produce it during the past 10 years because we have not got the information from the governments.

Technical assistance

Another simple exercise is technical assistance: we wanted to establish what we called at the time of my predecessor, Maurice Strong, a technical assistance clearing-house. We felt that it would be generally useful to define the needs of the developing countries, to find out who wants what in which area, what are the areas where the developed countries are willing to give assistance, and then put the recipient and the donor together. But after four years of trying there was no response from either side to establish a proper clearing-house mechanism.

Strangely enough, the developed countries have now started talking about the role of the UNEP as a clear-

ing-house for technical assistance, after I told the governing council two years ago that we were cancelling this as one of the goals for 1982, because it was not coming through. Not they think we should look into it again.

Another exercise that was looked at in Stockholm was the establishment of a registry of clean rivers. Here again, many rivers are a shared natural resource and if we try to look at who is creating the pollution problem, the governments aren't prepared to give us enough detailed information.

So I am not saying that we have done everything; no, we have not done a good many things yet. But the Stockholm action plan, on the basis of which we as UNEP were established, is a long-term exercise. We have implemented some of it in the past 10 years and we will go on during the next 10 years; but we may sharpen the focus on what could be done with regard to the experience of the previous 10 years.

Better use of resources

► *The action plan is long-term. According to the world conservation strategy, we have only about 20 years of natural resources left at the rate we are going now.*

— I don't think the world conservation strategy is saying that the resources are going to vanish in 20 years. It is identifying the areas of risk; to signal these is very important, and we have then to concentrate our ef-

forts on them. If we continue losing soil at the present rate to desertification, water, air and wind erosion, then we will be in a serious situation. We cannot continue to lose our tropical forests at the present rate of 11 or 12 million hectares a year, and about six to seven million hectares of arable soil a year. That is a loss in terms of productivity of almost 20 million hectares per year to desertification! We cannot continue using water as we have been using it. For example, for industry in Japan alone: in the 1950s they started with 50 million cubic metres of water per day. By 1978 they had jumped to 120 million cubic metres. By the mid-'70s, two-thirds of the 120 million cubic metres a day was being recycled and used again. So technology, combined with understanding of the meagreness of resources, is pushing people into new exercises such as utilization of residues, recycling, better and more rational use of the resources that we have.

The world conservation strategy is ringing the bell and the low-waste and non-waste technologies are starting to spread. Utilizing better our natural resources will develop life-styles which are less arrogant in their use of these natural resources.

"Environmental protection pays"

► *What particular sectors do you want to tackle as a priority in the future?*



FAO - Littlewood



UNEP

More than 11 million hectares of tropical forest are being destroyed each year

Every year about 20 million hectares deteriorate as a result of desertification, which represents a lost production worldwide of US \$ 26 000 m

— Well I don't think we would tackle any particular sector at the expense of any other. We will have to try and tackle every sector. My main concern is to ensure that there is a method which will allow the development process to take environmental considerations into account, in both planning and implementation. We need these guidelines very urgently, particularly for the developing countries. We need the tools to convince economists and planners the world over that environmental protection pays, and is not a stumbling-block for development. Everybody accepts this in principle but they still question whether it is economically sound, so we urgently need cost/benefit analysis specifically designed for environmental measures. In one or two years we should get guidelines on this.

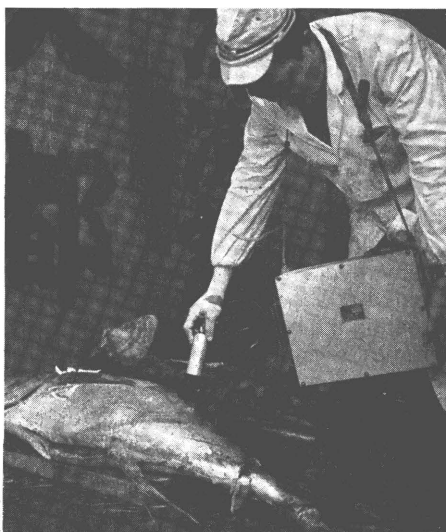
Then we very much need simplified techniques for environmental impact assessments of the projects and activities carried out by the countries. We cannot expect the developing countries to use the environmental impact assessment techniques of the United States or of the Federal Republic of Germany. They don't have the money and they don't have the human resources to do it. These tools of environment and management must therefore be available to us in the very near future. We have enough science and technology to solve a large number of the environmental problems that are facing us. We definitely know how to handle water better, how to protect the soil, how to combat desertification, how to protect the marine environment. But we require tools to convince the planner that when he invests in environmental protection, it is a similar investment to what he puts into industry or agriculture. It will pay back. Unless we get to the crux of this matter we will still be scratching the surface.

► *Towards a new science in environmental economics?*

— Yes, a new science in environmental economics by environmental economists. We need that, and we are moving ahead. Over the last three years we have been concentrating on this and I think we are on the right track.

Prevention is cheaper than cure

► *According to the results of the first studies on environmental economics, it is clear that prevention is better than treatment. Prevention would take only about 1 to 2% of GNP, whereas*



WHO

Quality control in a Tokyo fish market



UNEP - Farfens

Continued monitoring of oil spills in the Mediterranean; the regional seas programme is one of UNEP's most positive exercises



WHO

Environmental pollution control in Athens

to repair damage once it is done would take up to 5% of GNP.

— French governmental and non-governmental institutes have been carrying out studies on 25 pollutants in France and they reached that figure. The cost of pollution caused by these 25 pollutants comes to over 4% of the gross national product, while an investment of 1 to 2% of the gross national product can save this cost of pollution. The overall figures of studies that have been carried out by a number of countries, as well as the figures from World Bank studies on this issue, show that the average cost of pollution control measures ranges between 0.75% and 2% of the gross national product. The increase in prices as a result of this pollution control ranges from 1%, in the case of food and food products, up to 4.3% in the case of oil refineries. So the price increases are very limited and do not reach anywhere near the extent people were worried about.

The price of the priceless

► *If we turn now to the needs of developing countries, given the continuing world economic crisis, don't you think they find it increasingly difficult to bring the environment into account when they are considering a much needed development project, such as the Jonglei canal in southern Sudan?*

— This is a concrete example: the Jonglei canal created a good deal of discussion and speculation. The Sudanese government ran several missions with UNEP to study the environmental impact of the Jonglei Canal. Let us be very clear: any government must decide what level of risk, what sort of trade-off, it is going to have—don't tell me that people in the developed countries are living with 100% pure air or pure water. They are living with a certain amount of calculated risk. The same applies to any development activity. You cannot just simply say: we'll get the environmental protection up to 100%, knowing that if you keep it to 99%, you will use US\$ 5 million, while to keep it to 100% you would need US\$ 100 million. Obviously nobody will do the latter, unless this leftover 1% is so risky to human life that you cannot fiddle with it. But otherwise there is a trade-off and a sort of limit in environmental protection measures. This was put clearly in front of the Sudanese government. The same applies to all the other governments in the developing countries; they learnt the lesson and they know they cannot afford to make a major mistake by taking a haphazard decision today and then, in

five or 10 years time, try to correct this mistake. They are fully aware that with the present economic situation, they don't have any economic cushion, unlike the developed countries during their industrialization in the first half of this century when, thanks to a very solid economy, they could build up their development and correct their mistakes. The developing countries are not in this situation; they cannot take a major risk like the developed countries did and they are aware of this.

Fighting the desert

► *Looking at desertification, how far has the action plan to combat desertification gone. Has the desert been stopped?*

— We never said that the desert was going to be stopped in four or five years. The action plan was adopted in 1977 in the hope that by the year 2000 the process of desertification could be stopped as a result of the implementation of all the recommendations of the action plan simultaneously. When we made our first estimate of what was needed, we came to the figure of US\$ 400 million a year. When we revised the estimates two years later, and got an accurate assessment of what is actually being lost to deserts, we came to the figure of an additional need—in addition to what the developing countries and what the bilateral donors are already putting into it—of US\$ 2.8 billion dollars a year in order to stop desertification in the next 20 years. So this shows the magnitude of what we are up against. In the present economic situation, unless there are means other than official development assistance, like IMF gold sales for example, or a new trust fund for this particular aim or a tax on trade or on military expenditure, we will not be able to combat desertification effectively. What we are presenting now to the UN General Assembly is the establishment of an international corporation to finance the action plan to combat desertification, on the basis of long-term loans on very soft terms, at 2 or 3% interest over a period of 20 years and with a grace period of five to 10 years. Unless we come through with some of these recommendations, it will be very difficult to imagine that in 20 years, or even 50 years, we will stop the process of desertification at the present rate of implementation. Of course the majority of the donor countries are giving heavy emphasis to the Sudano-Sahelian zone. The drought there in the 1970s aroused worldwide interest and showed that there could be another disaster of this kind. So whenever we are presenting projects for combatting

desertification, priority is always given by the bilateral and multilateral donors to the Sudano-Sahelian zone.

The regional seas programme

► *Does the regional seas programme show a rather less gloomy picture?*

— This is indeed one of the more positive issues. I think we can safely say that we have three or four positive elements: the regional seas programme is one, the global environment monitoring system is another. The actual monitoring of what is happening with the climate, the waters, the soils,



"Not all the damage to the environment can be assessed in money terms—the value of life being an obvious example. Herein lies the dilemma of the cost-benefit analysis of environmental protection"
(UNEP)

the forests, etc. by this GEMS, this so-called ecological monitoring, is a novelty that has been established over the past four to five years to look at the overall ecosystem. By integrating all the information that you have by land assessment, from aeroplanes and from satellites, you can get an assessment of the risk areas and define what each area can carry in terms of crops, animals, human beings, etc. This is definitely a useful area of cooperation, as is the establishment of the International Registrar of Potentially Toxic Chemicals which is identifying a large number of profiles of chemicals which are likely to be toxic, and are therefore an issue which are on everybody's mind, be it in developing or developed countries. There is also INFOTERRA, the network of sources of information on the environment. We started this from scratch and now we have almost 120 coun-

tries with national focal points in the network, which utilize some 9000 sources of information to computerize all the environmental issues.

Environment as a unifying factor

The regional seas programme has a different slant altogether, and it has two very particular elements of success. One is that for each regional sea, the plan established covers the three components of the whole action plan of Stockholm: assessment, management and supporting measures, whether education, information, technical assistance, training or environmental law. Each plan for the 10 regional seas we are handling has these three components. The second is that people living around the limited body of water of their own region are willing to understand their problems and act upon them much more easily than when facing a more global problem. This means that countries which have been negotiating for about 10 years on the law of the sea have managed, in smaller groups, to produce a series of international conventions. Five conventions have so far been signed: one for the Mediterranean, one for the Persian-Arabian Gulf called the Kuwait action plan, one for West and Central Africa, one for the Red Sea/Gulf of Aden, and one for the south-east Pacific from Panama down to Chile. They work together to sign and ratify conventions, despite being in many cases at war with each other. We have the hardline Arab states sitting at negotiating tables all around the Mediterranean together with Israel; Algeria with Morocco; and Greece and Cyprus with Turkey.

Of course we have to handle things carefully, but this very peculiar situation shows that when people feel the sea pollution problem is touching directly upon their lives, they can work together in spite of their political differences. I could go on with other examples of this kind; for instance the Kuwait regional sea action plan, where eight countries, seven of them Arab states, including Iraq, the eighth one being Iran, work together on these very specific issues of the environment.

The point that we are always raising is that environment could be taken as a unifying factor. Political and economic issues may be very difficult to handle, but the environment is your life and mine, and on that basis we can easily come to grips with the problem and agree to work together and forget our political and economic differences. ○

Interview by
Roger DE BACKER

The ACCT ⁽¹⁾

"The complementarity that governs the relations between our member countries should also be found in their relations with other international organizations"

Interview with François Owono-Nguéma, the new ACCT secretary-general

► You were elected secretary-general of the ACCT in Libreville on 9 December 1980 and you took up the post officially on 1 March last. How does this new job fit in with your career—I think you were state minister for culture, the arts and education before?

— As far as I am concerned, my new duties are extremely interesting and extremely important. First, as you say, I spent 10 years in senior positions back home, with academic, political and governmental responsibilities. I was a minister of state and that's the culmination of a political career, really. But of course, it was all at national level.

New horizons

My job as ACCT secretary-general has opened quite new horizons for me and it leads me to look at relations between people and states and nations in a different way. It means I can cast a fresh eye on the world because there are 38 members, associated states and governments in the French-speaking community, that make up the ACCT. They represent hundreds of millions of people and this is something quite new for me. I used to attend ACCT meetings—the general conference, the administrative board and some of the ministerial conferences—before, but it was as a Gabonese. This time, I am on the other side of the fence, a humble servant of an immense community, the French-speaking community.

So I should like to underline the fact that these new duties really are opening new horizons for me, giving me a broad view that helps me realize the full complexity of the situation. Even in the ACCT itself, we have a highly representative sample of the problems facing the international community today, be they to do with the North-

South dialogue or the fundamental problems of development, because the vast majority of our members are developing countries.

Individuality, complementarity and solidarity

It is noticeable that the agency has an individuality of its own. Not just because we all use the same language, French, but because of the more or less traditional relations between many of our members and the fact that they have lived the sort of history that has helped them feel they belong to a community as such. This individuality is even apparent in the title of the ACCT, which shows we have multilateral cooperation that these countries have freely organized, on an egalitarian basis, amongst themselves. We think that the complementarity of the different nations involved is fundamental, and it bears fruit because we really do have solidarity between the members of our institution. This is something quite new for me. It is enriching. The job of secretary-general of the ACCT is a thrilling one.

► You were elected for a four-year term. When you were sworn in—in front a crowd of dignitaries—you said



François Owono-Nguéma

you would be guided by two things: the need for continuity and the need to be open-minded. Can you enlarge on this?

— I am the agency's third secretary-general. The organization has been in existence for 12 years now, and its action programme involves at least three main things: cultural cooperation, educational cooperation and cooperation with science and technology. For 12 years now, we have run programmes that have satisfied both the recipients and the organizers, ultimately, that is to say, our member countries. I can see no reason for changing this just because we have a new secretary-general. Quite the contrary. What we have to do is consolidate our achievements and try to see that our programmes provide better and better responses to the many demands of our member countries, who really are tackling the problems of development. This is also one of the reasons why, in a spirit of continuity, I intend to expand on the special development programme which was begun in Port Louis in 1975 in answer to the requests and expectations of the member countries.

But I think there is more to it than consolidating past achievements. An organization like ours is not entitled to do just that. It has also to be constantly aware of what the community that makes it up wants, awake to the needs of the peoples that belong to it, and as an organized body it must respond to the real, particular needs of the French-speaking community. I think that open-mindedness means that all the countries that speak and use French—totally or partially, as official language, mother tongue, working language or whatever—should feel and consider themselves an integral part of our community, and our dearest wish is to see the one or two countries still outside the family circle make the necessary institutional arrangements to join our French-speaking community.

The second thing about open-mindedness is a personal thing, the quality of the relations that the agency has to forge, intensify and consolidate with other international organizations. You represent one of these organizations and I should like to emphasize its importance, as the EEC also has relations with the ACP group.

The complementarity that governs the relations between our members should also be found in our relations with other international organizations too. We suggest that the other organizations look upon us as a possible means of implementing their own action through our member countries.

(1) Agence de Coopération Culturelle et Technique. Since 1 March 1982, the ACCT has been in new offices at 13, quai André Citroën, 75015 Paris, France (tel. 575 62 41).

Our partners still do not always have a good idea of what we do. We have to publicize it better, so that it is better seen and accepted as an opportunity for cooperation, both with other institutions and when it comes to combining forces to get something through to our member countries.

► *The ACCT has just got four new members: Two member states, Congo and Guinea, and two associated states, Morocco and St Lucia. What is the difference between these two statuses?*

— A fairly clear difference between the two was established back in 1970. The founders, who were very wise and had an acute sense of politics, knew that organizing a community on the basis of a language, in this case French, could, for a number of reasons, create a certain amount of apprehension in some countries. So it was felt that it would be better to make a proper distinction and make full members those countries that were full members of the Niamey Convention. However, other countries can also be associated with the full members if they put forward a precise programme for cooperation with the agency. The past 12 years have shown that this is really only a way of putting the various political leaders at ease about how they determine their cooperation with the agency. The proof of this is that, for the past 12 years, the associated countries have been involved in all the agency's events in just the same way as the full members. And these associated countries have the same voting rights in any ACCT decisions, so that the distinction, today, is in fact minimal. But some people prefer, for various reasons that I need not go into here, to stick to their associated status. It is their right, their sovereign right.

► *Do all these countries have the same obligations? For example, do the associated countries and the full members all make the same percentage contribution to ACCT operations?*

— Their rights and obligations are absolutely identical.

► *So the distinction is really just one of legal status, to enable the associated countries to have a little more flexibility in their involvement in the agency?*

— Yes, legal and political flexibility. Bilingual countries, for example, may feel more at ease if they are associated rather than full members, although we don't really have any major problems with this.

► *Apparently only two French-speaking countries, or countries where French is fairly important at least, have*

failed to join the ACCT so far: Madagascar and Algeria. Why is this and do you think they will join one day?

— First, historically speaking, it is worth remembering that Madagascar was one of the founder members of the ACCT in Niamey back in 1970 and it was for reasons of internal politics that its leaders later decided it would be better to withdraw, as they were perfectly entitled to do. Today, we give them the opportunity of being involved in agency programmes, as usual, and as far as Madagascar, in particular, is concerned, we have never really been aware that it has left.



The ACCT secretary-general with French foreign minister Claude Cheysson at a reception in Paris

Once again, our organization is showing itself to be founded on equality, complementarity and solidarity. We do not have little powers and super-developed countries dictating to the under-developed ones. We have brotherly equality and solidarity. We think that our programmes reflect our approach, our way of living and cooperating. We prefer to leave Madagascar and Algeria to have close contact with the Agency. Our dearest wish is that, one day, they will join the great French family to which they rightfully belong.

► *This is another example of open-mindedness.*

— Absolutely. It's what I was talking about just now.

► *You went on an official visit to Canada recently. Why did you go and what was the outcome?*

— I went at the invitation of the federal Canadian government, which was backed up by the provincial governments of certain French-speaking states of Canada, Ontario, New Brunswick and Quebec in particular. I went at their invitation. This was a big event as far as we were concerned, as it enabled me, as the new secretary-general

of the agency, to see just how important the Canadian community thinks the ACCT and the French-speaking community are.

I was able to get some sort of idea of why their belonging to the French-speaking community is not just a matter of principle. It also has something to do with their experience and the desire you feel they have to make multilateral cooperation among French-speakers a privileged instrument for the relations they intend establishing with the outside world. We were delighted at everything the Canadians suggested about extending the ACCT's programme and particularly their willingness and the means to be provided for us. For a new secretary-general, it was a source of both satisfaction and comfort to see the complete availability of a country like Canada.

► *So your mission was fruitful and interesting, and you saw a country that is only partly French-speaking willing to play a proper part and help an agency such as yours?*

— It augurs very well for the future, I should say. And the agency showed its pleasure, because this is a good illustration of its work. Canada is indeed a bilingual country. When I was in Ottawa, full sovereignty was switched from London to Ottawa. Bilingualism could have been thought to be a brake on involvement in the French-speaking community. They are full members of the Commonwealth and they say they are with the French-speaking world all the way. So, ultimately, that shows that the language barrier is often a pretext for some people who want to opt out of the solidarity that is so essential to mankind at the end of this 20th century.

Personally, I should like to say, once again, that the ACCT is one of the many instruments that the international community has to increase solidarity, in as many ways as possible, as solidarity engenders brotherhood which in turn engenders peace.

► *What are your projects for the near future?*

— I should rather not divulge what we are doing inside our organization, where you found us deep in work, straight away. The whole secretariat is thinking about the future, about the immediate future, as the administrative board will be meeting in September and we want to set out a certain number of ideas at this session. So I don't want to disclose anything about that yet—but the outcome could well be a reason for us to meet again. ○

Interview by
ALAIN LACROIX

IVORY COAST

For many years, the Ivory Coast was an exception in a West Africa prey to political upheaval, natural catastrophe and economic disaster. The country's smooth development, its sustained growth (8% p.a. at constant rates over the past two decades) and the attraction it held for investors the world over made it the Africa's representative in the group of rapidly developing countries, such as Korea and Brazil. Its economic performance was considered miraculous—a term which the Ivorians did not like because of its supernatural connotations. Abidjan, the capital, bristling with skyscrapers and called the "Manhattan of the tropics", became the symbol of a kind of prosperity that nothing could undo.

And then came the economic crisis. The check it caused in growth gave rise to some doubts and questions, but did not lead to any major upheaval. It was an opportunity to think about new policies and make fresh choices. In this feature, the *Courier* presents the different aspects of the Ivory Coast's economy, its current difficulties, the prospects due to the discovery of oil and the central role that the country plays in this region of Africa.

A crisis of growth

The "conjunctural" economic situation, that abstract and somewhat esoteric term, is perhaps one of the best-known imports in the Ivorian vocabulary. The Ivorians even talk about being "conjunctured", meaning that they are hard up or feeling low. They use it frequently—to explain away redundancies (which are unusual in an economy that has been expanding so far) or price increases or the postponement of work on the infrastructure. They also blame it for the thousand and one problems of everyday life. It is as if the Ivorians, being philosophical, had decided to make the very best of a crisis which is the international version of the local short-term economic situation, and by making fun of the crisis, get rid of it that way.

But this crisis would never have occurred if the prices of the country's commodity exports had not dropped, according to Abdoulaye Koné, the minister for the economy and finance. "Collapsed" would be nearer the mark, as the prices of coffee and cocoa dropped by more than half from the peak they reached in 1977 following the Brazilian frosts. The price for cocoa was CFAF 500 per kg in 1977 and less than CFAF 250 in 1980; the figures for coffee were CFAF 1 750 and slightly more than CFAF 500. Agriculture minister Denis Bra Kanon puts the country's losses on these two products at CFAF 1 000 000 million plus in three years, compared with the figure for the equipment and operational

budgets combined: around CFAF 800 000 million in 1982.

And in spite of everything the country has done since then—often, like the decision to hold out on the speculators and stock cocoa in 1980, with a certain amount of panache—prices stay low.

This is the thread that leads through the maze of the "conjunctural" economic situation. The state, which is the main driving force as far as growth is concerned, has less money (coffee, cocoa and timber together account for

two-thirds of the value of exports) and therefore has problems financing its development plans.

The country's other big source of money, Caistab (the agricultural price support and stabilization fund), which had ploughed as much as CFAF 150 000 million p.a. into the economy during the years of wealth, also suffered a considerable setback when commodity prices dropped. The triangular financing scheme for projects (a third from the state, a third from Caistab and a third from external loans) could no longer be used, and there was a tendency to finance everything from external loans. But as the Ivory Coast had used this formula for major infrastructure works, such as roads, ports and dams, its debts, CFAF 1 500 000 million in 1981, were considerable and repayments, which double every year, are increasingly difficult to respect. The debt/exports ratio is almost up to the 30% mark, or five points above the dangerous 25%. Hence IMF and IBRD intervention at the Ivory Coast's request. "They forced nothing upon us", Abdoulaye Koné made clear, referring to the occasional complaints that are made about the solutions suggested by these currently monetarist-minded organizations.

The three-year recovery plan (1981-1983), drawn up with IMF and IBRD help, involves cutting public spending and the balance of payments deficit, postponing certain investments and ensuring tighter management of state companies. There are also credit facilities—SDR 484 500 000 over three years from the IMF and a structural ad-



Abidjan, one of the most modern capitals of Africa, known as the "Manhattan of the tropics"



Abdoulaye Koné

Minister for the economy and finance

justment loan of \$ 150 million plus a technical assistance loan of \$ 16 million from the World Bank.

Highly diversified production

This was all that was required for some people to predict the end of the Ivorian miracle, forgetting that the country has an economic base able to generate further take-off, as Mr Seiller, EEC delegation economic adviser in Abidjan, put it. "The Ivory Coast has completed the first stage of development. The main highways have been surfaced, 80-85 % of school-age children actually go to primary school, there are electricity supplies in rural areas and import substitution industries have been set up. There is now a great change in scale to be made. The highways will become motorways, the railways will be developed, more bridges will be built, more laboratories opened and more universities and research institutes created. There is even a concern with things, town drainage systems, for example, that would be considered luxuries elsewhere".

Over the past 20 years, the Ivory Coast has given itself facilities that are unique in this part of Africa—and they are partly behind its present problems, of course, as they required very expensive investments. Any description of the Ivorian economy tends to reduce it to the coffee-cocoa-timber trio; although these three products were certainly behind the country's wealth and they still account for a preponderant part of its exports (the Ivory Coast is the world's biggest producer of cocoa and its third biggest producer of cof-

fee), it has still made a remarkable effort to diversify its agriculture. And the effort has paid off. The country has become a major producer of cane sugar and oil seeds. The oil palm plantations are a fine example for neighbouring countries. And, with 36 000 ha of rubber plantations at the end of 1981, the country also produces an increasing amount of latex. It is also second in rank among the cotton producers, although this crop was almost unknown in that part of the world when the country became independent, and it is beginning to introduce soya.

Its food crops are as varied as its cash crops. Rice has increased constantly although not enough to keep pace with growing demand from the towns. Yams, manioc, taro and plantains make up the bulk of the diet in the rural areas, but there is also a certain amount of fruit-growing (pineapples and bananas) and market gardening.

This wide range of products would have been enough to make any developing country happy, but the Ivory Coast has its industrial units too and they attract the interest of the biggest multinationals—as shown by the Blohorn Group takeover by the Anglo-Dutch giant Unilever. The main industries are concerned with agricultural processing. There are sugar refineries, oil mills, canning plants and textile factories. But other sectors have been developed too. They include chemical and timber factories, assembly units and a range of factories connected with the building trade (cement, concrete reinforcement bars and so on). All in all, something like 70 000 people work in industry, which has expanded at 11 % p.a. over the past five years.

All these developments, it has to be



Séri Gnléba

Minister for planning and industry

admitted, have been possible because of the modern transport and communications network, in particular the reliable, well-maintained road network with its fine northern motorway, a four-lane 140 km highway with a telephone every 2 km. The Ivory Coast also has a merchant navy and is currently one of the only countries of Africa south of the Sahara able to handle a large part of its sea freight with its own ships, and to benefit from UNCTAD's 40/40/20 rule. Lastly, major investments have been made in energy, in both dam construction and oil refineries. The surprising result today is that 90 % of the electricity consumed in the Ivory Coast is from HEP plants (and 100 %, a technician told me, when it rains). With the projected construction

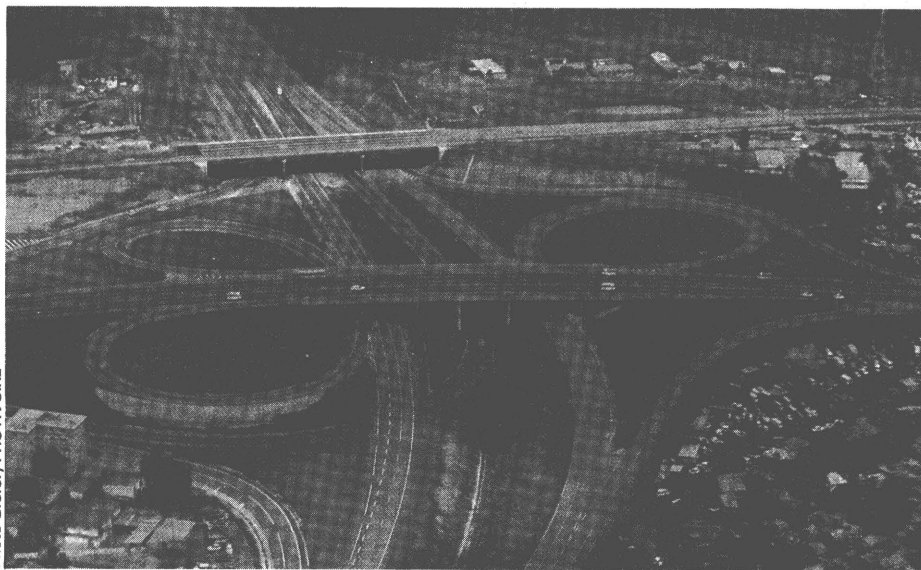


Photo BICICI/PHOTOVOIRE

The Ivory Coast has a modern road network. This picture shows the intersection at the entrance to the northern motorway

of the Soubré dam, the country could even export energy.

Taking stock

Prosperity based on such a varied economy cannot collapse overnight. The Ivorians realize this. And although they make no bones about their problems (all the statistics are there for everyone to see), they stress that this is a world-wide crisis and not even the richest countries are spared. It is an opportunity for the Ivorians to take stock. The government, according to Séri Gnoiléba, minister for planning and industry, intends to turn this period of marking time to good use by thinking about the kind of heavy investments they should be making. An analysis of the results of the last five-year (1975-1980) plan produced information about certain trends in the economy. "Although the figures for what we achieved in 1975-80 are better than predicted, we must be clear about the fact that as far as those investments that go with development (roads, dams, energy programmes and so on) are concerned, we went beyond what was outlined in the plan, speeding up in 1977-78. And the same went for investments in education and social affairs too".

But this success, the minister said, should not conceal the weaknesses in the raising of the standard of living, for example, or the delays in "Ivorizing" the economy. State intervention, which has contributed to more than 75 % of growth, "should not mask the relative



The port of Abidjan is of central importance to the region

lack of national interests in large industries, major trading concerns or the distribution network... When the state took the place of the private investor, in most cases it made errors in management and lost a good deal of money". And to complete this negative balance, it should be added that results in the food crops sector have been unsatisfactory. Rice has been particularly bad, as production cannot keep pace with demand. The increase in imports of everyday consumer goods is far greater than those of capital goods.

Putting initiative back in the hands of the private sector

The new plan, now being approved, naturally takes the weaknesses into account, but no change in the general direction of development is planned. The three basic aims—a liberal economy, openness to the outside world and the individual well-being of all Ivorians—will be maintained and even stressed. In particular, priority will be given to investments that will bring about self-sufficiency in food. Greater productivity in the coffee and cocoa industries will be sought and more emphasis will be laid on the coffee industry. The industrial sector will have to cover a greater percentage of domestic demand (the figure was 52 % in 1980) by winning internal markets; trade minister Amakon Thiémélé, who has launched promotion campaigns to encourage people to consume Ivorian goods, is especially keen on this.

All this will mean investments, but the state will not be looking for funds on the financial markets first of all. The policy, Abdoulaye Koné said, "is to mobilize all our internal forces, to use

as many of the financing possibilities of the official development aid institutions as possible and to move onto the international financial market only for the complement". During the whole period, the state will be running the budget very stringently and increasing its liberal leanings by intervening less in the economy and encouraging private (national and other) investments. Previously, the planning minister said, "the state always provided more than 50 % of the big projects. It will go on helping, but we think that it should simply encourage projects rather than have a preponderant interest in them".

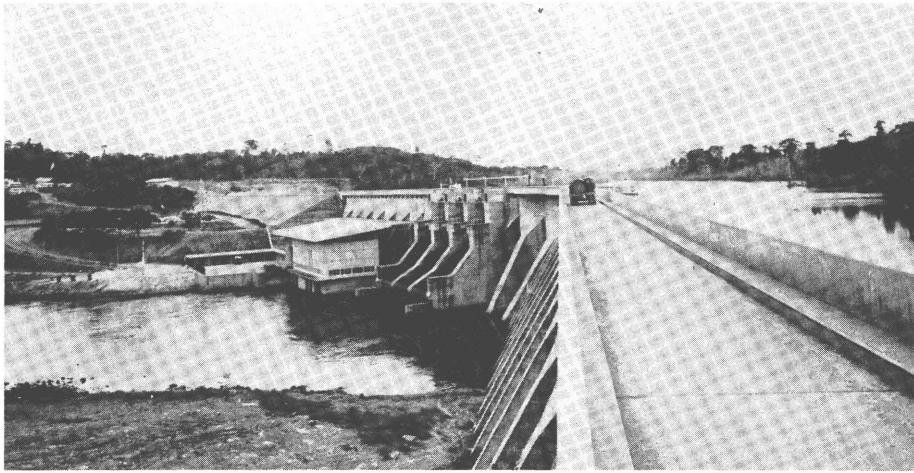
The process of making state firms into viable, prosperous private enter-



The country's agriculture is extremely diversified. The Ivory Coast is known for a whole range of produce, including fruit...



... and coffee (picture shows a coffee bush in flower)



90 % of the Ivory Coast's electricity is produced by HEP stations



The timber industry has undergone a great deal of development, but the tropical forest is shrinking

prises was also triggered off by this desire to put initiative back into private hands. This is the second stage in the current reorganization of the state sector, the first one having involved closing those firms which lost money and were of no economic interest to the country.

So the policy is one of austerity. But it will not prevent the financing of major investments such as roads, dams and new sources of energy, for "the economy has to be given the means of expansion". The Ivory Coast has already made preparations for the post-crisis era and it has had a trump card, oil, with which to do so. Oil has been produced since last year, but it has not been included in the 1980-85 plan, which reflects the Ivorian leaders' desire not to be swept up in the "black gold" rush and to keep agriculture as the driving force in the economy.

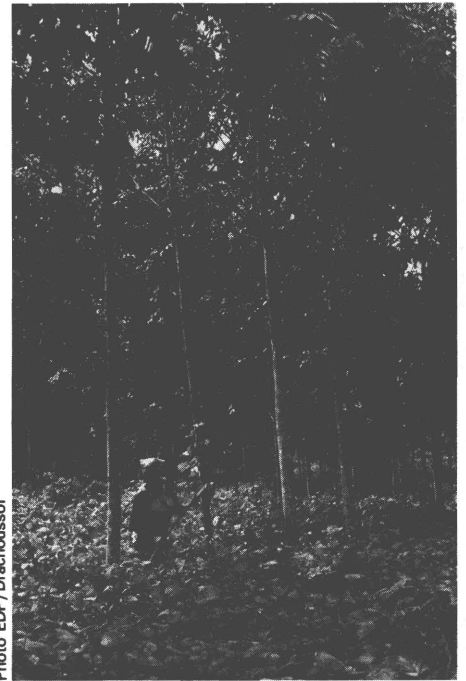
However, oil, associated with gas, goes a long way to explaining the confidence that foreign investors are currently showing in the country's future; the Ivory Coast could become self-sufficient next year and have a surplus for export later on.

The planning department will be drawing up a further document, the oil plan, dealing with the oil sector, which should become significant towards the end of the five-year programme. At the moment, the Ivory Coast imports about CFAF 200 000 million worth of petroleum products a year to meet needs of around 2 million t. "If we manage to cover this consumption, it will free an important part of our foreign exchange and increase our ability to take on foreign debts to finance our development operations".

These resources will mean that the public works sector, which has been

such a dynamic part of Ivorian growth, can be relaunched in 1983. They will also breathe fresh life into an economy that is waning because of the slump in the prices of its main exports. The Ivory Coast needed this, because it felt it was extremely unfair not to get a proper reward for the effort it had put into developing its cash crops.

With prices that were often lower than cost, the Ivory Coast decided to stock its cocoa in 1980; this cost a lot of money. However, there is no doubt that the country will go on pleading the case for commodities, oil now giving it more margin for manoeuvre.



Rubber plantation. Latex production is constantly on the increase

When, in 1960, René Dumont wrote his *Afrique noire est mal partie*, most African leaders of the period reacted violently against it. Facts later proved them wrong, as some heads of state, President Senghor and President Nyerere, for example, recognized. Now, 22 years later, the Abidjan daily *Fraternité* of 3 March 1982 said the celebrated agronomist admitted that the Ivory Coast was the exception that proved the rule when he met President Houphouët-Boigny, and that the country was on the right road. If its ability to respond rather than submit to the economic situation is anything to go by, and the variety of instruments at its disposal and the extent of what it has already achieved are of any significance, then we must agree with what Dumont said and perhaps take the view that the crisis the Ivory Coast is experiencing today is simply one of growth. o

AMADOU TRAORÉ

Food crops, the new priority in agriculture

"In farming, economic activity is still thriving and we are still doing well. You often hear about 'the economic situation' in Abidjan, but there, people are referring to industry and the tertiary sector where a number of staff have had to be laid off". There is an impressive battery of statistics to back up what Abdoulaye Koné, the minister for the economy and finance, says. In all but rare cases (rice and cotton), cash crops and food crops are rising in uninterrupted curves on the graph. In 1980, when the crisis was at its height, agricultural production went up by 9.6% (volume) and the figure for 1981 was 6.2%. It was only a drop in the prices of the two main exports that prevented the country from reaping the benefits of this remarkable effort.

In spite of a determined diversification drive, which has produced considerable results, farming still accounts for more than two-thirds of the country's exports. And equally significant is the encouragement given to farming by the country's leaders, President Houphouët-Boigny for a start, who is very proud of his peasant origins and has created modern farms, some of which he has given to the nation. Many civil servants are following his example and becoming weekend planters; the towns are now more or less empty and the countryside full on holidays. There are an estimated 200 000 family cocoa plantations and 700 000 people work-

ing in the cocoa trade. Coffee involves, directly or indirectly 2 350 000 people.

Even oil, which has only just begun to be exploited, should not affect the primary sector's leading role in the economy, for whenever the country's leaders agree to talk about this new asset, it is to stress that it will be used, first of all, to finance the development of agriculture. This is fair enough; over the past two decades, it is agriculture that has financed Ivory Coast's miracle.

The economic motor of the Ivory Coast

It has done so, primarily, with the earnings derived from cocoa and coffee. Since independence, production of both these has increased constantly. In 1960, the coffee harvest was 135 000 t and the country produced 85 000 t of cocoa. Twenty years later, the figures were 367 000 t of coffee and 412 000 t of cocoa; meanwhile, the Ivory Coast had become the world's third largest producer of coffee (and first for Robusta) and its largest cocoa producer. All this was made possible by the work of "Caistab", the agricultural produce price stabilization and support fund, the real economic motor of the Ivory Coast. A link between producers and the world market, it provides protection against the negative effects of major fluctuations in the world rates of these products. It also guarantees a sufficiently good purchase price to encourage production. When world prices are high, the fund banks profits which are used to finance a special investment and equipment budget, to grant subsidies to improve agricultural production and so on. When world prices are low, the fund supports the prices: in practice it pays the exporter the difference between the export price and the guaranteed price (cif).

The fund has devised a complex system of collection (buyers have to take all available produce), processing, quality control and export, using the services of private operators who obtain its authorization. The soaring prices that followed the frosts in Brazil in 1975 filled the Caistab coffers and helped development in Ivory Coast to the tune of CFAF 140-150 000 million

p.a. in 1977-1979. The slump which followed melted a lot of this wealth away! The fund paid out and, Mr Bra Kanon said, it can now only do a tenth of what it did before.

The Ivory Coast declined to join the International Cocoa Agreement, mainly because the guaranteed price of 110 cents per lb did not cover its production costs. It does not plan to change its mind and it has taken internal measures, the constitution of a producers' front having failed to resist either manipulation by big dealers or economic factors. Some countries have a knife at their throats. The Ivory Coast, Mr Bra Kanon said, is going to push up the added value of its cocoa by exporting fewer beans and more finished and



In spite of the remarkable expansion of rice production, demand still cannot be met

semi-finished products. It will also be increasing its processing capacity (currently 70 000 t) and it is developing special techniques for capitalizing on non-grade cocoa. The country also has a storage capacity of 100 000 t. "We proved we were technically able to stock cocoa in 1980—that the Ivory Coast could keep its word after the heads of state met in Yamoussoukro and it was decided to stockpile cocoa". However, the country does not want to be the insurance cover for all the countries which sell under the counter. "We shall stock cocoa if it is necessary and if it is in the interest of our farmers", said the agriculture minister.



Denis Bra Kanon
Agriculture minister

Improving productivity

Although cooperation among cocoa producers has not been very fruitful, in the coffee trade the story is different. The Ivory Coast belongs to the International Coffee Organization and Mr Bra Kanon is the chairman in office. The 1976 agreement, which has been extended to 1983, seems to be a good basis and, with a view to improving it, the African producers in the African coffee organization (OIA) have decided to speak with one voice, that of Ethiopia, their spokesman. What they want is to get their part of the market developed, particularly the Robusta market, which has tended to stagnate and even slump over the past few years. They also want to suppress taxes on coffee (as exist in Belgium, for example) as they could cut consumption.

But the main internal drive will be to improve productivity. The plantations are old and will be regenerated by cutting back, although the areas under cultivation will remain the same. An attempt will also be made to diversify agricultural production even more than in the past. The Ivory Coast was quick to realize the danger of depending on a small number of products, so, in 1963, it launched its "palm plan", assisted by the EDF. With more than 100 000 ha planted (including the biggest single plantation in the world) and 14 oil mills opened, the country is Africa's biggest producer of palm oil, with an output of 150 000 t in 1980. The multinational company Unilever has taken over the interests of the Blohorn palm oil processing group and this augurs well for the development of this sector, which has had one or two problems to contend with recently.

The decision to make the Ivory Coast a rubber producer goes back further, to

Some Ivorian agricultural products ('000 t)

	1978	1979	1980	1981
Coffee	196	277	248	367
Cocoa	304	312	370	412
Palm oil	676	597.6	879.7	810
Cotton	102.9	114.8	143	137
Rice	504	534	508	490
Maize	264	275	284	291
Millet	44.6	45.8	46.5	48
Sorghum	31.7	32.9	33.5	35
Yams	1984	2068	2133	2215
Manioc	1056	1112	1144	1270
Plantains	1123	1178	1237	1245
Taro	274	287	302	310

before independence. Today, there are about 36 000 ha of rubber plantations, 19 500 ha of them actually producing. The 1980 yield was 22 350 t and the government plans to get the figure up to 80 000 t by 1990. Investments of CFAF 4 000 million are to be made this year and the accent will be on village plantations. The diversification policy was also in line with the aims of regional development. The gap between the rich south and poor north had to be reduced by introducing and developing potential cash crops in the savanna areas. This is why the costly sugar cane project was launched (see ...) and why soya is going to be introduced, with help from Brazil. Seed farms are already in existence and should soon be operational.

Cotton, another product of the north, has been given considerable attention. More and more land is being brought under cultivation and production is

growing constantly. With 137 000 t of cotton seed, the Ivory Coast is vying with Mali for first place in French-speaking Africa, and it has the raw materials it needs for its textile factories.

Providing enough food

This drive to diversify increases the country's assets but does not shield it from fluctuating prices (which are fixed externally), even though the prices of all raw materials are unlikely to drop at once. In the past, the stabilization fund has been able to compensate for losses in the case of one or more products by gains on others. But the lesson of the recent fluctuations has not been forgotten. Rather than continuing to develop crops with variable prices indefinitely, the existing areas will be kept under cultivation (except for coffee and cocoa), if only to reap the benefits of any further rises. In particular,



The banana industry, in spite of one or two problems, provides considerable supplies for export



The Ivory Coast is the world's largest producer of cocoa



The Ivorian forest has suffered markedly from intensive exploitation over the past 10 or 20 years and the plans to regenerate it are far from adequate

emphasis will be laid on food crops and a state secretariat has been set up specially to deal with this.

A three-year agricultural plan (1983-1985), mainly devoted to self-sufficiency in food, will start next year. The various elements of this policy are taking shape. Since 1978, the state has been offering Ivorian farmers 30 000 ha of free land clearance (paid for by the fund), provided they then grow crops mentioned in the plan. A subsidy fund (CFAF 300 m) and a guarantee fund (CFAF 500 m) have been set up at the BND (national bank for agricultural development) to encourage young people to go back to the land once they leave school. A line of credit will be reserved for farm mechanization. All these things will increase the facilities already available and should ensure that agricultural production keeps pace with the demand from towns like Abidjan, where the population doubles every seven years.

This means righting the balance in the rice trade, where production increased regularly up to the 534 000 t paddy mark but then decreased as demand rose (due to a state subsidy which maintained the price of rice at CFAF 100 per kg). Last year, 300 000 t of rice had to be imported, although some of it went to supply markets in the neighbouring countries, it is true. Among the other food crops, maize and manioc will be encouraged. Manioc, Ivory Coast's third food product after bananas, plantains and

yams, could well be expanded on an industrial basis. A mechanized crop programme has started up around Toumodi, near Yamoussoukro, with the aim of producing atiéké (a popular dish akin to cous-cous), flour and chips, all of which can be stocked, from manioc.

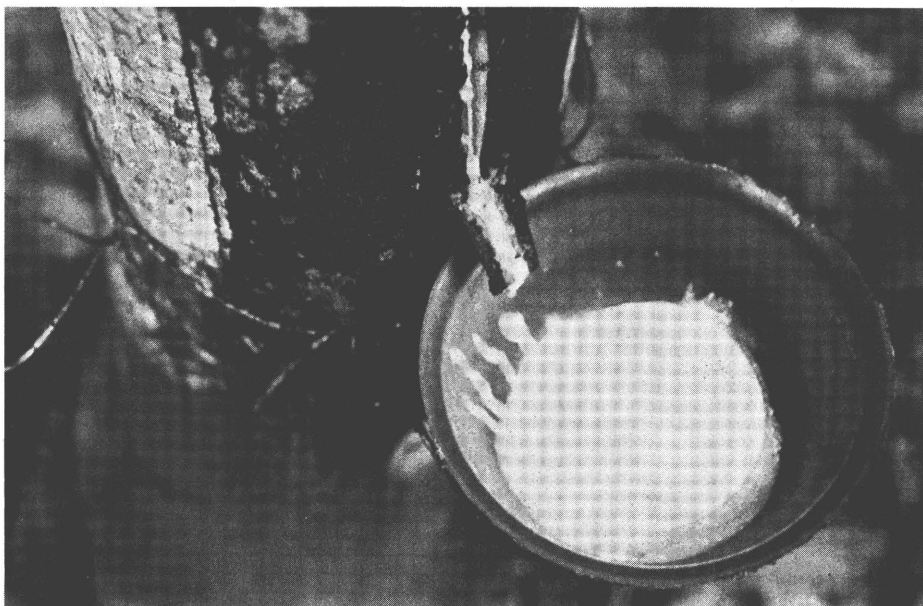
A proper picture of Ivorian farming (see table) has to include the market gardens round the towns, which have modern structured back-up and fruit production (pineapples and bananas in the main) where there are currently

problems with both quantity and quality. Many research institutes in Ivory Coast are working on improving the yield of all these crops.

The forest in danger

However, there is one shadow over this otherwise rosy picture and that is cast by the rapid destruction of the Ivorian forest which is being eaten away by land clearance for agricultural purposes, itinerant crop-growers, the traditional method of clearing by burning and industrial overexploitation.

Wood was one of the three things on which the country's growth was founded (the other two were coffee and cocoa). In the sixties, it accounted for a quarter of all exports, but the figure today has gone down to 15%. The forest covered 15 000 000 ha in 1956, but there are only 3 000 000 ha today and at this rate (500 000 ha p.a. cleared), it could be entirely gone in only a few years. Obviously there are plans to reconstitute the national forests, but the 3000 ha or so planted every year are tragically inadequate for this purpose. In the long run, all exploitation will certainly have to be stopped, something which the new oil prospects could make possible, for the disappearance of the forest would have incalculable effects on the ecology. Some people are even talking of the sort of climatic changes that would be catastrophic for the crops, and this just at a time when the country is making its farming into a modern sector that can export widely and enable the Ivorian farmers to move on, as Mr Séri Gnléla, minister for planning and industry said, from simple farming to agricultural exploitation. ○ A.T.



Latex production. Rubber plantations were established to help diversify agriculture and improve the regional balance

Waiting to join the sugar protocol

What had been expected for some time actually happened early this year when the Ivory Coast applied to join the sugar protocol, annexed to the Lomé Convention, which provides for the EEC to buy about 1.3 m t of white ACP sugar per annum at guaranteed prices. This is a logical consequence of the development of sugar complexes in the Ivory Coast, as the country's capacity far outstrips national requirements (75 000 t of the national production of 135 000 t is sold on the domestic market), and it has the support of the ACP group which is currently working on adapting the protocol. The point as far as the Ivory Coast is concerned is to obtain stable prices for part of what it produces so it can happily contemplate repaying its loans within the prescribed time.

When, in 1974, the country decided to launch its sugar plan, the world rates were high and the long-term prospects promising—which no doubt had something to do with the decision. But the main thing was to find for the northern part of the country a crop that would play the part coffee and cocoa had played in the economy of the forest area. In the north, per capita GNP was \$ 200 in 1975 as against \$ 700 in the country as a whole. The aim of the project was to create a focus for development, with dams, roads and health and education facilities, so that people who might otherwise have moved south or into Abidjan would stay on.

But the initial amounts were soon exceeded and the state had to lower its sights. Instead of the 10 complexes originally planned, it decided only to

carry on with five, plus the first one that had already been established. On this occasion, there was talk of overcharging increasing the cost price of Ivorian sugar, currently at around CFAF 250 per kg. But Sodesucre head Joseph Kouamé Kra, says that the cost price of sugar will drop when all the complexes are working normally, as at the moment some of them are only working to one third of capacity and others at 70%. The old Ferkéssédougou plant built in 1971 produces white sugar at a cost price of CFAF 150 per kg, which is very competitive. This year, production is expected to reach 170 000 t, scarcely half (80 000 t) of which will be consumed locally. The total capacity of all the country's sugar



Dr Joseph Kouamé Kra
Director-general of Sodesucre

plants will be 310 000 t, once they are running normally in, it is hoped, 1984.

So it is urgent to find outlets for very large quantities. So far, Ivory Coast has managed to place brown sugar in Portugal and the USA, but at not very good prices. Two years ago, Sodesucre investigated the ECOWAS markets where needs are immense, particularly in Nigeria, but the demand is for white lump sugar and most Ivorian sugar is brown.

Sodesucre is currently looking into the possibility of refining its production and selling it in lumps, but this would mean further investments which would

push up the cost of the already very expensive sugar programme.

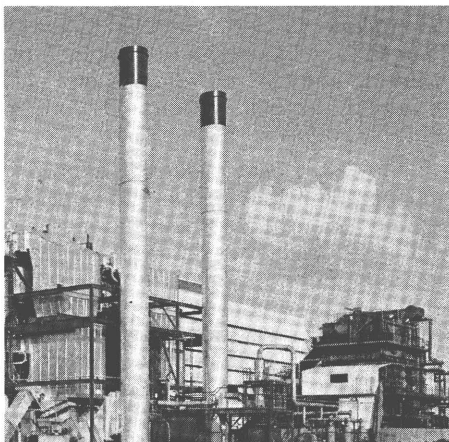
Without wishing to prejudice any decisions the Ivorian leaders may take, it seems unlikely that, in these lean years, financing will be given for any of these additional schemes. However, the Community market will take guaranteed quantities at prices that tend to be far higher than the world rates. But Europe produces more than enough sugar of its own and the sugar beet lobby, which is very powerful, is wary about any developments in this field.

But the Ivory Coast is well placed to gain admittance to the sugar protocol. It has two arguments, which are carefully set out in the memo it sent to the Commission. First, there is the importance of sugar production for the country's future and second the responsibility of firms in five of the member states (Belgium, France, the Netherlands and the UK Germany), sometimes with a guarantee from the state concerned too, in the implementation of this programme. On this latter point, the memo says that "80% of the financing of four sugar complexes has come from financial establishments in the countries of the EEC". And then there is the contribution which EEC nationals have made to building these complexes and to managing them during the early stages. And they have supplied spare parts and been concerned with training contracts too.

Claude Cheysson, former development commissioner, drew the member states' attention to the need for coherence in their investment policies in the Third World on a number of occasions. His idea was that it was wrong not to be concerned with the marketing of a product when one had been involved in setting up production capacity.

The Ivory Coast's application to join the sugar protocol is now being investigated. If it is favourably received and the country gets a substantial quota, it could well find, after a number of difficulties, that its sugar plan is being successful. And marked results have already been achieved. Around 15 000 jobs have been created and there are 10 000 more during the harvests. All in all, CFAF 10 000 million is distributed in wages in an underprivileged area every year.

And, what is extremely rare, the sugar programme has managed to reverse the migratory trend and people are now leaving the towns in the south and coming north to seek jobs. And this makes Sodesucre boss Dr Kouamé Kra, particularly proud. ○ A.T.



A sugar refinery in the Ivory Coast

Oil — the way to further growth

Oil! The word is virtually taboo in the Ivory Coast. Since 18 October 1977, when President Houphouët-Boigny made his official announcement about oil being found offshore, the occasion on which he drank his first-ever glass of champagne, nothing has been said about it. There is not the smallest reference to oil earnings in the five-year development plan (1981-1985). It is as if the Ivory Coast had decided to overcome the crisis simply by using the means that have made it prosperous so far. The official silence is only broken by reports of activity that the foreign companies have to submit because of the legislation in their own countries. These communiqués, which tend to be laconic, talk about boreholes, productive intervals and abandoned wells. There is nothing that will give an exact idea of the extent of the country's new wealth or of the anticipated rates of production.

The reasons for this discretion, which generates the most fanciful of speculation, does credit to the Ivorian

leaders. What they have to do is avoid the imbalances that have appeared in many of the oil-producing countries that are forced to import almost all their food. For in the Ivory Coast, they realize that oil is not replaceable and any income from it must be invested judiciously in agriculture.

Long prospection

There have been various stages in the oil prospection process. The first research was in 1928, the results were poor and investigation petered out. Things started up again in the 1950s, but they were halted once again until the beginning of the '70s. But it was not until 1977 that it was clear that there were exploitable deposits. There are in fact two of them and they are offshore.

The first, called *Béliér*, is off the coast by Grand Bassam, 30 km east of Abidjan, and has been worked by a consortium comprising Esso (63.75 % of shares), Shell (21.25 %) and Petroci, the Ivorian national company (15 %), for the past two years. It produced 116 000 t oil in 1980, 480 000 t in 1981 and the figure could go up to 800 000 t fairly fast, although injections of natural gas are essential to reach this level. *Béliér* is a modest deposit which cannot go on producing for very long.

The *Espoir* deposit, off *Jacquerville* 50 km from Abidjan, is more promising, but it is further offshore than *Béliér* and the water is deeper. It should start producing oil in August and could yield as much as 1 500 000 t next year. Phillips Petroleum is operating the consortium that will be running *Espoir*. It holds 57.5 % of the shares and the other partners are Agip (22.5 %), Sedco (10 %) and Petroci (10 %). But on part of the concession, two of the three cost and production sharing contracts mean that the state can increase its own shares up to 60 %, in which case the other companies' holdings would be reduced accordingly.

Earnings for agriculture

Prospecting is continuing on land and at sea. The Ivory Coast has defined 17 research areas, 11 of which have been allocated and two of which are about

to be. So more deposits could well be discovered. But next year, the Ivory Coast can count on a yield of about 2 000 000 t, i.e. roughly what it consumes now. And the first aim is indeed to meet domestic demand and thereby liberate the CFAF 200 000 m spent on oil imports every year. Anything produced over and above this will be exported.

At the Ministry of Planning and Industry it is felt that oil will not become really significant until towards the end of the period of the plan (1981-1985). This is the other reason why it was not taken into account when the plan was devised. "But while the plan is being implemented", Mr *Séri Groléba* said, "we are going to produce an additional document, the oil plan, which will be integrated into the plan already being implemented but will cover the period that follows".

Earnings from oil and gas (the two products are associated in the Ivory Coast's deposits) will be invested, as a matter of priority, in agriculture, which *Séri Groléba* calls the country's only option. The requirements of farming are considerable, particularly when it comes to chemical fertilizers (120 000 t p.a.) and insecticide (1 500 000 l p.a. for cotton alone).

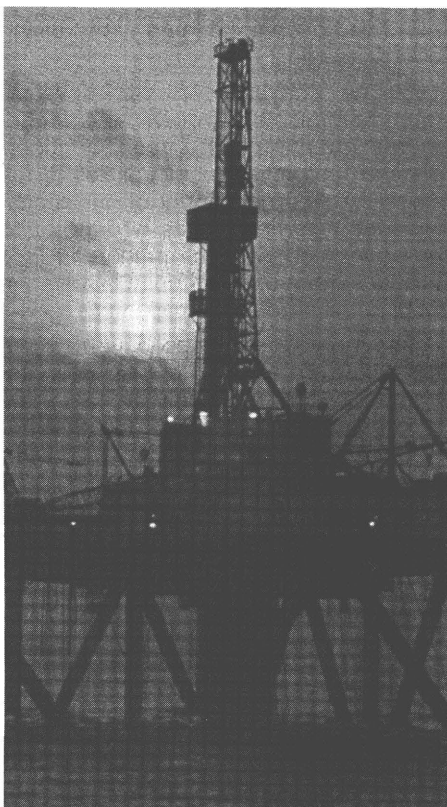
Funds from the oil/gas industry could be used to encourage the development of preserving plants in the food sector right across the country.

Oil

Is this an indication of future levels of production?

The Ivorian refining company SIR is expanding. It was set up in 1965 with an initial capacity of 700 000 t and its possibilities increased to 2 000 000 t a few years later. The figure will reach 4 000 000 t once the new hydroskimming and hydrocracking services have come into service. The SIR has also installed sulphur recuperation, gas washing and fuel mixing units and built a wharf for oil tankers of up to 250 000 t.

The Ivory Coast is already exporting refined oil to Mali, Upper Volta, Benin and Niger and these new facilities will make it possible to increase this trade tenfold. Although agriculture has to stay the priority sector, there is no doubt that oil will dominate the country's economy in the coming years, for it will enable the present financial crisis to be solved and provide the Ivory Coast with the means of further growth. ○ A.T.



Offshore oil-rig off the Ivory Coast. Prospecting is continuing on land and at sea

A focus for development in West Africa

"In the Ivory Coast, no one minds a foreigner making a fortune". These are the words of a top Ivorian civil servant and they illustrate a fact. Ivory Coast society is a living negation of all the sociological theories that say that 10% is the tolerance threshold for immigrants, for, in this country, the figure is way beyond that. The 1975 census showed that 22% of Ivorians were of foreign origin and the figure is as much as 29% in urban areas, where the foreign population tends to congregate,

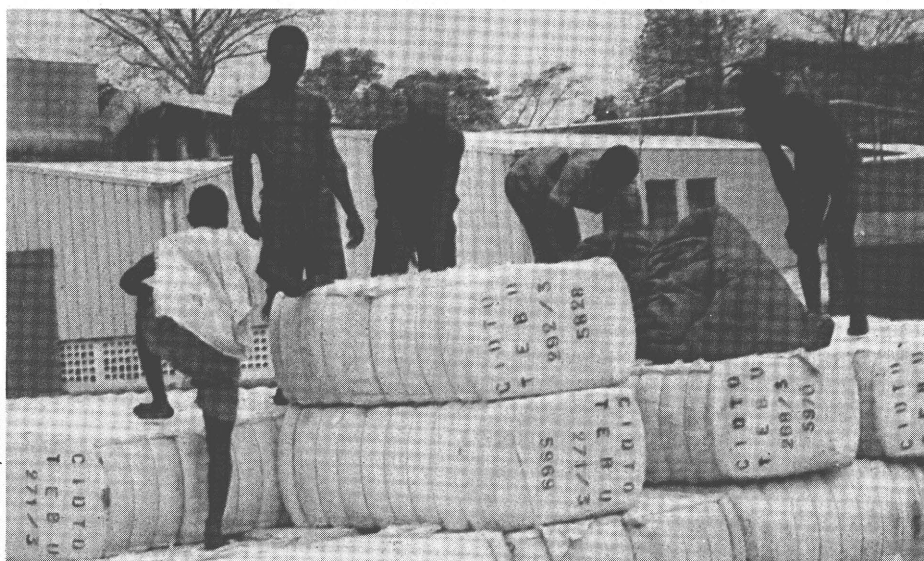
beyond a simple respect for the treaties it has signed. The CEAO (West African economic community) treaty, for example, provides for free movement of individuals. As Guy Nairay, head of the president's office told me, no Africans need visas to come to the Ivory Coast and soon after independence there was even a question of giving any African living in the country Ivorian nationality.

The Ivory Coast has obviously benefited from this open door policy, which

Creating an area of solidarity

The foreigners have contributed to the growth of the Ivory Coast, but they have, undeniably, also benefited themselves. The Ivorian leaders are clear about it and Abdoulaye Koné, the finance minister, talked about regional cooperation in the following way: "If some people are in a better position than others, then this relative prosperity has to be shared". For the Ivory Coast, the best way of showing its solidarity is to develop regional cooperation. It is a member of the main regional and sub-regional groupings in this part of Africa, belonging to the CEAO, ECOWAS, the Conseil de l'Entente and UMOA (1) and its economic dynamism obviously means that it is one of the principal providers of funds for these organizations. For example, 60% of the foreign exchange reserves of UMOA until the last two crisis years came from the Ivory Coast and the Ivory Coast alone provides half the CEAO solidarity fund (the other half comes from the other five members). As Mr Koné says, the country does this willingly, as it feels it is its duty to do so. If you point out to him that all this helps the expansion of the Ivory Coast's production and its penetration of the neighbouring markets, he says, quite categorically: "We do what we do out of solidarity with the other countries.

(1) West African monetary union.

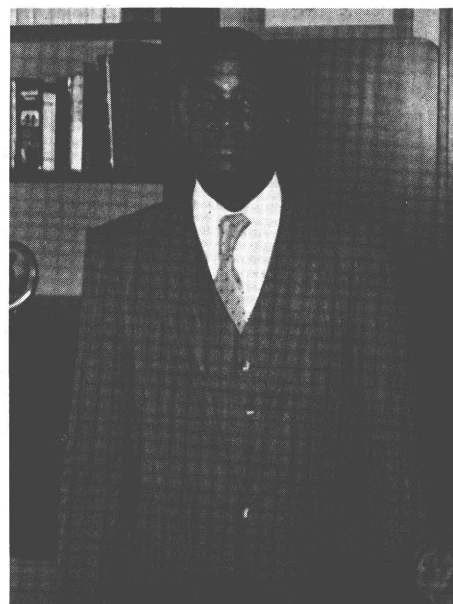


Cotton bales leaving for the factory. The Ivory Coast's textile trade has a market throughout the region

and 50% in Abidjan, the capital, where half the million and a half inhabitants are from abroad. An estimated 2 million Africans from other countries lives in the Ivory Coast; there are 100 000 Lebanese and Syrians and 60 000 Europeans, most of them French, as well.

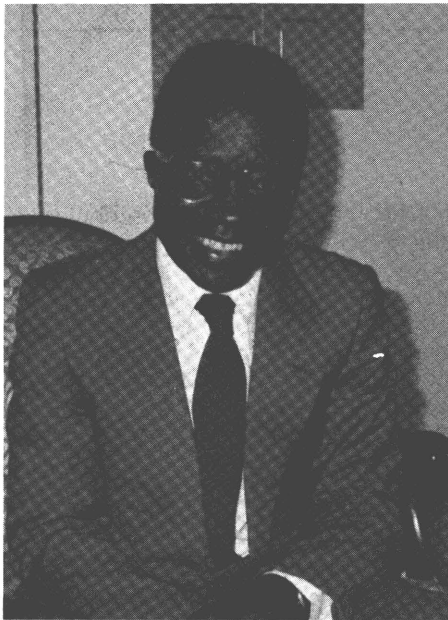
African immigration is mainly from the neighbouring countries—Mali, Guinea and Upper Volta above all, whose nationals account for a large part of the labour force on the plantations. But there are also large groups from Senegal, Nigeria and Mauritania. All these people are attracted by the prospect of a better standard of living and their settlement is made all the easier by the fact that there are often the same ethnic groups either side of the frontiers and that the government had a very liberal reception policy that went far

has given it the workers it needed for its plantations and building sites as well as the skilled people it required for certain sections of the administration, education in particular. Sectors like trade are almost entirely manned by foreigners, to the great regret of the departmental minister Amoakon Thiémélé, who deplores his compatriots' lack of interest in commercial activities, although he is hopeful about attracting them gradually. But the countries of emigration also get a spin-off. The immigrant stays in contact with his family at home and sends them money and gifts. It is very difficult to put an exact figure on all these transfers, but people from Upper Volta, for example, send an estimated CFAF 20 000 million home every year. Transfers to Mali and Guinea are smaller, but significant nevertheless.



Amoakon Edjampan Thiémélé
minister for trade:

"The Ivorians have to take an interest in trade"



Amon Tamoh,
head of the CICE:

"We have created an export mentality"

We gain nothing from it—at least not immediately. The market will no doubt come, in addition, afterwards, because this is the aim of these communities; but, at the outset, the idea is for us to create a zone of economic solidarity".

But for certain products, the market is already there—even if it is not as complementary as Bra Kanon, the agricultural minister, would like. In 1979, the Ivory Coast exported CFAF 38 000 million worth of produce to other members of the CEAO, equal to 7% of all its export trade. And everything seems to point to the fact that Ivorian industry will find a natural market in the sub-region. This is borne out by Amon Tanoh, the head of the CICE (Ivory Coast's external trade centre), who said: "The turnover generated by just one trade mission in Africa may be as much as CFAF 400 or 500 million or even 1000 million in only a few days". The Ivory Coast has, he felt, a real export mentality and this is partly due to the work of the CICE.

Some industries, such as textiles, where the country has a large production capacity, have failed to sell on the European markets and found substitute outlets in the neighbouring countries, thereby managing to expand nevertheless.

The region

The region and the sub-region are an ideal framework for the development of food crops. Bra Kanon, the agriculture minister, emphasized this, saying: "With food crops, ECOWAS trade can be improved and unity can be streng-

thened... The organization needs 1 200 000 t of sugar and is a net importer. The Ivory Coast has been exporting sugar since last year and it is out of the question for the product to wander round Portugal and the USA before coming back to Lagos to feed our brothers in Nigeria. Which is why we feel that we should devise a food crop development policy that will help the region and the sub-region".

The importance of the region is also apparent in the country's ports where a lot of the trade from the landlocked countries of the Sahel transits. And because the Ivory Coast is further advanced in its development, it has the sort of experience that it can pass on to the neighbouring countries. The best example of this is no doubt the CICE, which was set up more than 11 years ago. It was the first centre of its kind in Africa and it did, Amon Tanoh, its director, told us, help with the creation of other such centres in Africa south of the Sahara, on particular in Zaire, Cameroon, Mali, Senegal, Upper Volta and Sierra Leone. "When they are appointed, our colleagues come to Abidjan to find out about the way we work".

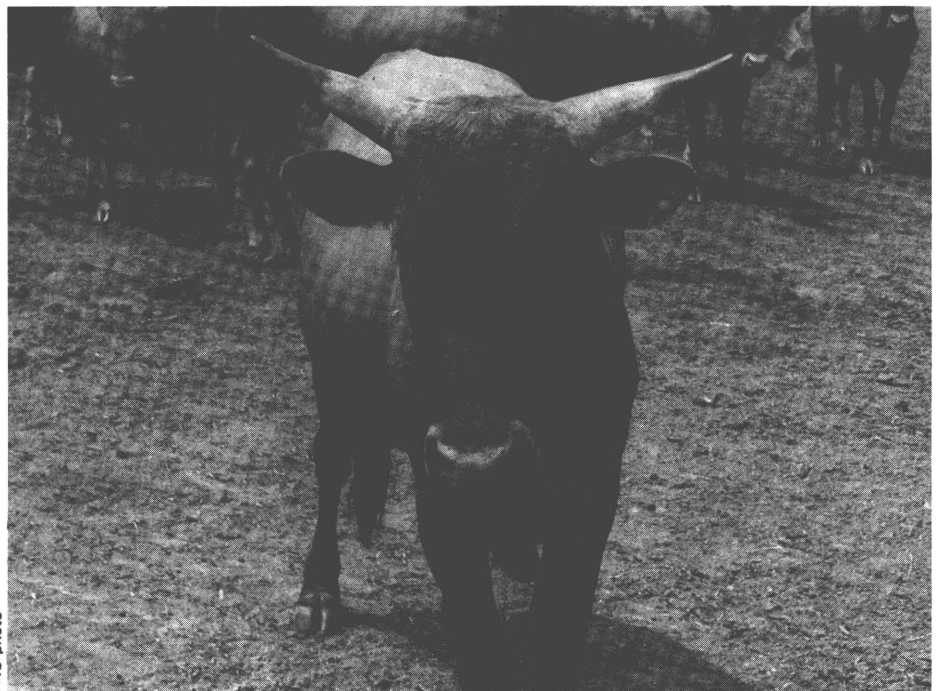
The World Trade Centre, whose offices in Abidjan have just been completed, is a logical follow-up to the CICE. This body, aimed at developing trade, will, once operational, serve both the Ivory Coast and the whole of the sub-region. Trade minister Amoa-kon Edjampan Thiémélé said: "This World Trade Centre has to be a meeting place for international businessmen

and companies, as well as an information centre". It will have a data bank containing figures on the economy of the Ivory Coast and its neighbours, an exhibition hall and facilities for meetings and all modern forms of communications.

The Ivory Coast is obviously backing regional cooperation in this project too. Is this a display of solidarity or an economic necessity? Both no doubt, because a desire to be open to other countries is manifest. Several years ago, President Houphouët-Boigny made a memorable statement on one of his trips to the USA. "The Ivory Coast", he said, "has no wish to be an oasis of prosperity in a desert of poverty", and no opportunity to quote him is lost today. ○ A.T.



Immigrants make up a large percentage of the labour force on the plantations



Cattle-rearing is not a traditional activity, but there has been a drive to develop it and so provide more of the country's animal protein requirements

Profile of the Ivory Coast

Area: 322 000 sq.km

Population: 8.4 million (end 1980)

Capital: Abidjan - pop. 1.5 m

National day: 7 December

Head of state: President Félix Houphouët-Boigny

GDP: CFAF 1 940 000 million (1980)

Exports: CFAF 580 000 million (1980)

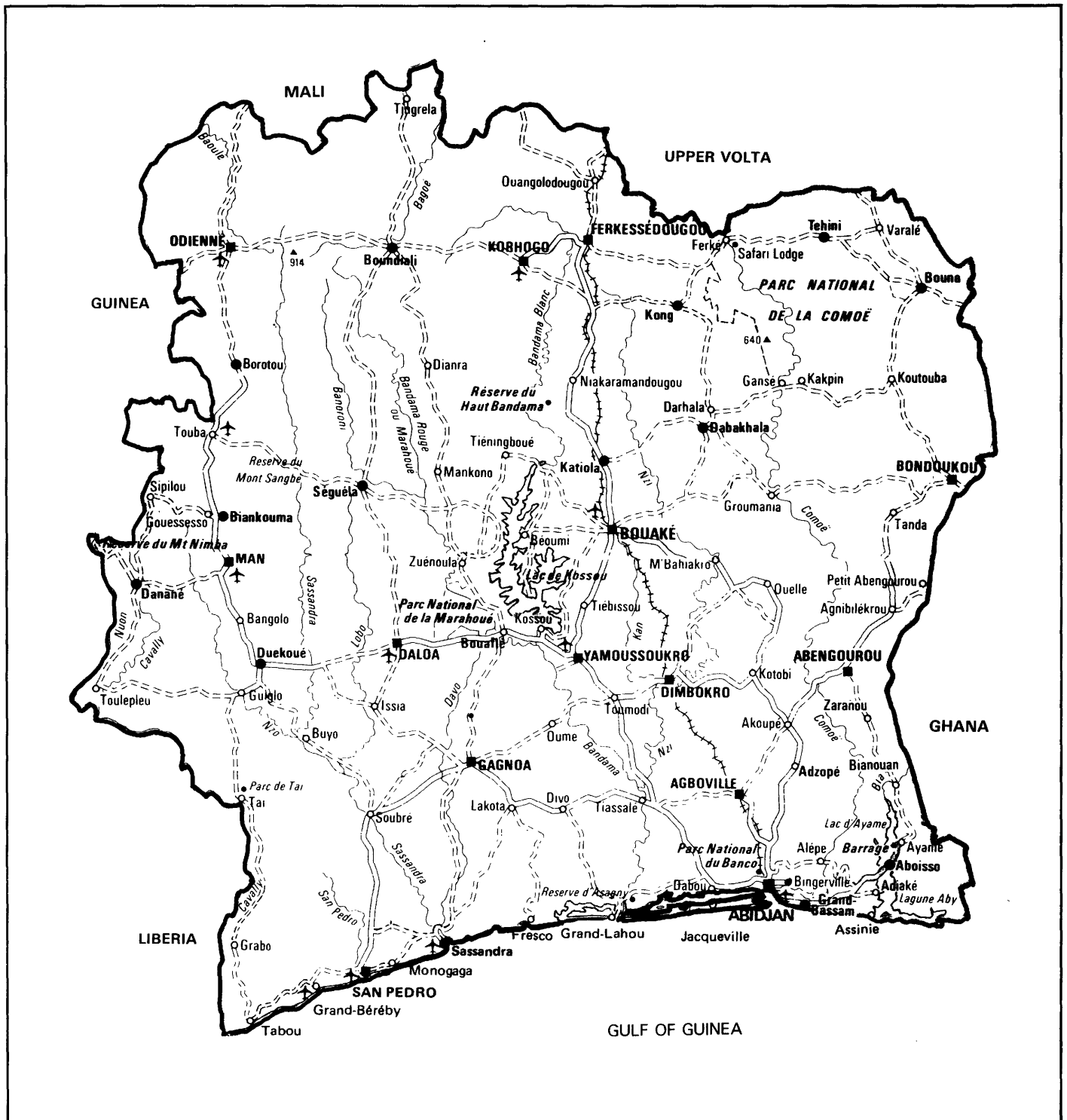
Imports: CFAF 600 000 million (1980)

Main exports: Coffee, cocoa, wood, palm oil

Main imports: Equipment, manufactures, petroleum products

Main trading partners: France, Netherlands, USA, West Germany

Currency: CFA franc (CFAF 50 = FF1)



Ivory Coast — EEC

A story of continuous cooperation

With its advanced level of development and its dynamic economy, the Ivory Coast is certainly one of the best-placed countries when it comes to capitalizing on the provisions of the Lomé Convention. And projects or EDF financing are not the most important aspect of its relations with the EEC, as they tend to be in many other members of the ACP group. More prominent are the various aspects of trade cooperation and, to a large extent, the problems of raw materials.

Trade cooperation: promoting overseas sales

The Ivory Coast has the biggest trade in non-oil goods with the Ten in the ACP group and it immediately realized what advantages the opening of the EEC frontiers to its products (mainly textiles, food and fruit) involved. More than 60% of its sales are to the EEC and, in 1981, these exports accounted for some CFAF 350 000 million.

But the existence of an open market and the selling of large quantities of goods on it are two very different things. Products for sale in Europe have to match the consumers' trends and tastes, distribution circuits have to

be penetrated and competition has to be fought. The Ivory Coast has reckoned with all this by launching its foreign trade promotion policy. The CICE, the Ivorian foreign trade centre (which has had two big slices of financing and technical assistance from the EDF) has branches in the big consumer centres of Europe (in Brussels, Cologne, Milan and Paris). These are strong advance positions in the fight to win markets. Alongside this, the CICE has organized a number of missions, promotion weeks and displays at trade fairs on all the continents, with a view to getting Ivory Coast products known and accepted. The centre has also recently begun looking for partners and outlets, for such Ivorian companies as want them, via an export management society that specializes in supplying "key-in-hand" sales contracts abroad. The Ivory Coast, has set up an international trade centre affiliated to the World Trade Center Association, and is asserting its international interests by emphasizing new markets in the Gulf states, in Nigeria and the USA.

A new external trade promotion scheme worth ECU 2 325 000 has just been set up under the 5th EDF to help the CICE and provide it with any technical assistance it needs.

More industrial cooperation needed

In spite of all the European Investment Bank has done in this sector (see table), industrial cooperation between the Ivory Coast and the EEC still needs a boost, at least as far as the institutions are concerned. It is worth noting that industrial development in Ivory Coast gets a lot of help from the private sector in Europe, which has made large investments in the country in view of the Ivorian policy of welcoming foreign business and of the stability it has always been able to offer.

So, in addition to official relations with the Commission, there are very close links between individual firms which are worth a great deal.

Since the CID was reorganized and its two missions went out to Abidjan, joint ventures seem on the cards; old projects look as though they can be revived and new ones set up in the industrial sector, thanks to systematic exchange between the CID and the departments of the Ministry of Planning and Industry.

Raw materials — positions coincide

The Ivory Coast, through its President, has always fought to prove that raw materials have to be bought from the producers at a fair price, with no speculation, to ensure them a decent, regularly expanding income. The EEC has always tried to take this position into consideration and to have a political approach to the problem of commodities. But as they are not the only consumers, the group of European countries cannot by themselves shape the international agreements as the developing countries, of which Ivory Coast is the self-appointed spokesman, wish, particularly since it is not always easy to obtain unanimity within this group.

But the European Community is not inactive in this field. It is in constant contact with the Ivory Coast on these issues, via its delegation in Abidjan. At a higher level, there is ongoing consultation between the President and the development commissioner.

Stabex, for all its imperfections, has compensated for considerable losses in the Ivory Coast's commodities exports on a number of occasions.

In 1976, in particular, an ECU 15 million transfer was made following a slump in the timber sector.



Community aid has been used to build basic infrastructure such as this 216 km road between San Pédro and Issai

Total Community resources channelled into the Ivory Coast

	EUA million	CFAF million
1. Prior to Lomé		
1st EDF (1961-1965)	39.7	10 520
Yaoundé I (1965-1969)	71.3	18 895
Yaoundé II (1970-1975)	99.1	57 450
Total prior to Lomé	210.1	86 865
2. Lomé I (1976-1980)		
a) <i>Commission resources</i>		
Indicative programme		
Delegation expenses	40.0	
Interest rebates	3.5	
Regional cooperation		
CIMAO project	18.0	
Abidjan-Accra road	10.0	
Metal fittings for the RAN	2.0	
Regional organizations & studies	16.5	
Stabex	15.0	
CID	p.m.	
Total Commission (excluding regional cooperation)	112.5 66.0)	32 625
b) <i>EIB resources</i>		
Loans from own resources		
National projects	46.4	
Regional projects (CIMAO)	14.0	
Risk capital	3.0	
Total EIB	63.4	18 386
Total Lomé I (a + b)	175.9	51 011
3. Total 1961-1981		137 876
ECU million (1)		
4. Lomé II (1981-1985)		
a) <i>Commission resources</i>		
Indicative programme	from 46.0 to 63.0	
Interest rebates (estimate)	12.0	
Regional cooperation	58.0	
Stabex (*)	19.2	
CID	p.m.	
Total Commission (excluding regional cooperation)	from 135.2 to 152.2 from 77.2 to 94.2	
b) <i>EIB resources</i>		
Amount guaranteed in the indicative programme including one project already approved	60.0 (10.0)	
Total Lomé II (a + b)	from 195.2 to 212.2	
(1) 1 ECU = CFAF 309 at the moment.		
(*) Excluding an application currently being processed in Brussels.		
NB. The discontinuation of reciprocal customs agreements in 1976 gives the Ivory Coast an extra CFAF 5 - 6 million (estimate) every year.		
— The procedures for refunds on the purchase of European wheat involved around CFAF 12 000 million in 1975-1980.		
— The Ivory Coast has received CFAF 300 million in aid outside the Convention (NGOs and emergency aid).		

And more recently, in July 1981, an ECU 19 200 000 transfer was made to the BNDA (the national agricultural development bank) as partial compensation for losses in coffee earnings.

A third application, also for coffee, is now being processed by the Commission's specialized departments and payment should be made within a few weeks.



Agriculture minister Denis Bra Kanon awards a medal for agricultural achievements to Antonio Lésina, the Commission delegate in the Ivory Coast

Financial aid from the EDF

The Ivorian state budget (operation and improvements) is more than CFAF 700 000 m this year and fixed capital formation was CFAF 616 000 m in 1981. So it is clear that Community aid, which is obviously limited, can only have a marginal effect compared to official national investments.

However, the effect of EDF and EIB financing is far from being negligible, because of the easy terms offered and the fact that investments are concentrated on a number of one-off schemes.

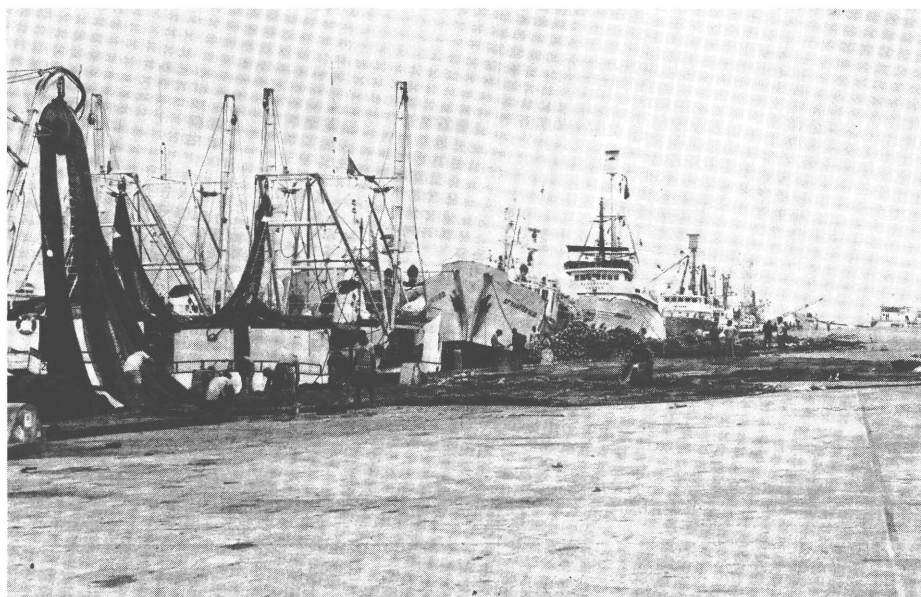
Regional action

The EDF, which provides the Ivory Coast with grants and subsidies, has been invited to give priority assistance to the north, the underprivileged area of the country. So the regional capital of the savanna, Korhogo, has benefited from a number of schemes, including water supplies, a regional hospital, drainage, market gardening schemes, food crops, etc.

Action in different sectors

The 20 odd years of EDF aid can be divided into two periods—the first, when the emphasis was on basic infrastructure in education (i.e. mainly the 1st EDF, from 1961 to 1965) and the second, during which the diversification of agriculture was the important thing. During this period, European financing aimed at helping the harmonious development of the country in the light of its own priorities; it included the palm project, the rubber project and rice and cotton schemes. More details of EDF and EIB assistance follow.

1st EDF (1961-1965). More than CFAF 10 000 million was involved here and most of it went, as stated above, into education (the girls' high school in Abidjan, the ENA, the teachers training college, the national institute of public health, 60 primary schools in the North, various other high schools, training centres and so on). Financing in the public health sector went to five hospitals and the Institut Pasteur. A



The Abidjan fishing port which has benefited from EDF financing

number of basic economic infrastructure schemes (a fishing port, roads, etc.) were also run.

2nd EDF (1965-1969). The emphasis here was on agriculture. Two projects that were of basic importance to the future of the country (the palm project and the cotton development scheme) were set up at this period.

The palm project was launched under the 1st EDF with a grant of CFAF

EIB schemes in Ivory Coast

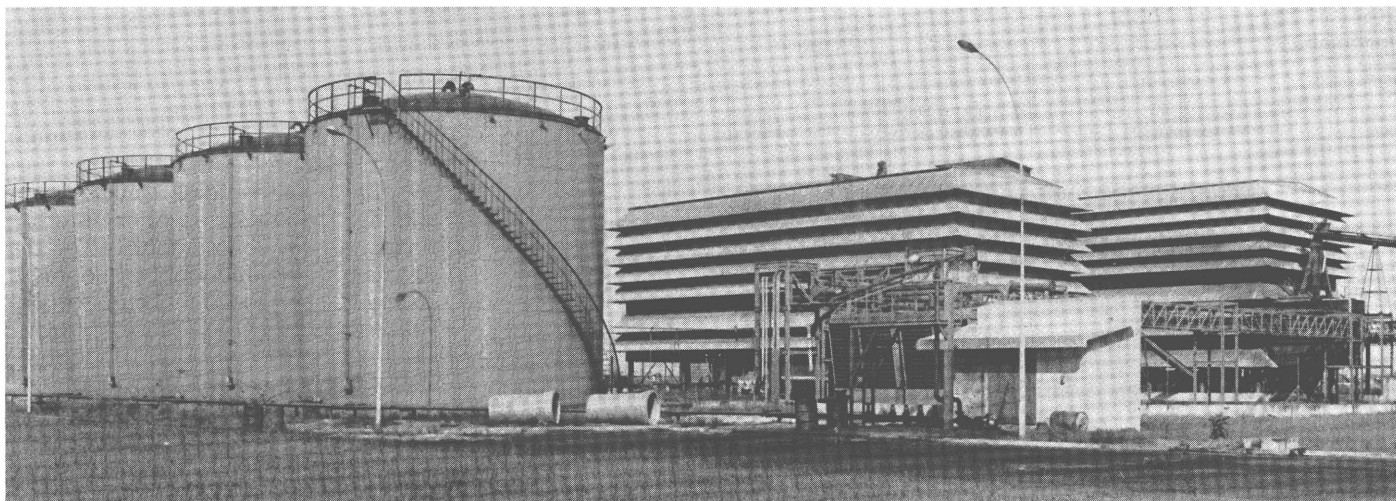
Ordinary resources

Date	Subject		Amount (ECU '000)
1965	Banana packing	Sonaco	1 015
1968	Pineapple canning	Salci	1 000
1969	Citrus growing	Coci	527
1969	Oil mills	Palminindustrie	9 100
1972	Dimbokro textile plant	Utexi	4 500
1972	Port of Abidjan		4 700
1972	Rolling stock	RAN	3 000
1973	San Pédro-Issia road		7 920
1974	Textile factory	Cotivo	5 400
1974	Railway	RAN	14 000
1977	Electricity control centre	EECI	11 000
1977	Oil mil	Palminindustrie	7 500
1977	NOVOTEL hotel	Abidjan SIL	1 650
1977	Dessicated coconut factory	Sicor	1 440
1979	Electricity link-up with Ghana		6 000
1979	Latex processing plant	Saph	4 600
1979	Fertilizer factory (extensions)	Siveng	5 170
1980	San Pédro flour mill	MSO	3 000
1980	Line of credit for SME	(CCI + Cofinci)	2 000
Total			93 522
Risk capital			
1976	Participation in CIMAO		2 000
1977	Participation in SICOR		250
1978	Manioc processing study		200
1979	Participation in SIVENG		550
Total			3 000
Grand total			96 522



Many EDF projects are in the northern parts of the Ivory Coast. This picture shows a borehole in the Bouaké area

1 200 million and consolidated under the 2nd EDF with CFAF 8 100 million. The EIB looked after the industrial side of things by financing oil processing (CFAF 2 600 million in 1969). A 1 700 million grant enable the north and west of the country to be developed. The remarkable results of these two operations ultimately led to loans from other external aid sources.



EIB-financed palm oil processing plant at Vridi. The palm plan was launched under the 1st EDF

It is also worth noting that this period saw the beginning of the well operation that was extended year after year, and the various RAN schemes (CFAF 1 700 million). Between them, the EIB and the EDF invested CFAF 20 000 million of Community financing at this time.

3rd EDF (1970-1974). Financing here was divided between agriculture, which was still the priority, and transport.

There were three major schemes to diversify production and make for regional balance. They involved rice growing (CFAF 2 900 million), getting industrial rubber plantations under way with co-financing and developments in the Kossou-Bandama region (approximately CFAF 1 000 million).

Work in the transport sector included restructuring the central road network, resurfacing the San Pédro-Is-sia road (CFAF 2 000 m) and modernizing the RAN (CFAF 1 400 m). These were the biggest schemes and the two last-named also received loans from

the EIB. Trade promotion (CICE) was also covered and financing was provided for the first SITHA (the Abidjan international textile and clothing fair).

Lastly, the EDF gave assistance in the herding sector, providing around CFAF 1 000 m to set up the Marahoué ranch, and helped public health by financing the Korhogo hospital.

All in all, EIB and EDF financing over this period was worth CFAF 28 000 m. Among the EIB projects were two important textile complexes (Utexi and Cotivo).

4th EDF (1975-1980). The majority of the funds here went on previous schemes—the development of the Kossou area (CFAF 1 000 m), continuation of the rubber plan (CFAF 1 400 m), the well operation (CFAF 3 100 m) and the financing of trade promotion.

It is also worth noting that the cost of part of the Abidjan-Accra road, now being built, was covered, that partial financing went to the Bingerville school of electrical studies and that funds

were given to the national sheep-rearing programme.

The EIB has also assisted the EEIC (CFAF 4 800 m), for the agro-industrial sector (Palminindustrie, Sicor and Saph), chemicals (Sivenor) and the hotel trade (Novotel).

The full amount of money available under the 4th EDF has not all been used so far, but more than CFAF 32 000 m has nevertheless been committed.

It is interesting to note that the study grant and training course programme has enabled more than 4 000 Ivorians to study in Europe, with EDF financing. The total amount involved here since 1961 is CFAF 1 900 million.

5th EDF. This fund, which began in 1981 and covers the period of Lomé II, will be channelling between CFAF 30 000 m and 36 000 m into the Ivory Coast, in addition to anything given as part of regional cooperation.

Some projects to provide domestic water supplies and run trade promotion campaigns have already been launched and others, large-scale agricultural operations, are now being studied.

As we have seen, cooperation between the Ivory Coast and the EEC is wide-ranging. Within it, the problem of development is viewed from all sides and financial aid, trade preferences, commodity stabilization, industrial cooperation and more are all taken into account, which means that the country is a particularly important partner because it makes daily use of all the provisions of the Lomé Convention. But it also means it has responsibilities, as, in the forthcoming negotiations, it will have to try to improve the ACP-EEC instruments of cooperation by giving everyone the benefit of its experience in all these fields. And who knows, this could all lead to an ACP-EEC Convention of Yamoussoukro. ◊



EEC ambassadors visit the water supply project in Korhogo

CARDI

Scientific support for Caribbean farming⁽¹⁾

The member countries of the Caribbean Community are small and cannot individually afford the range of expertise needed for a dynamic agricultural research and development programme. Recognizing this, the Caricom countries established the Caribbean Agricultural Research and Development Institute, CARDI, in 1975.

Since its inception, CARDI has concentrated its efforts on those sub-sectors of agriculture which historically received the least attention—small farmers and commodities produced for local consumption. The major agricultural industries in the region, most of which are export-oriented, have been able to support their own research activities. These include sugar, bananas, citrus, coconuts, rice and coffee.

CARDI plans and implements its work programme in association with the governments and commodity research agencies. In the smaller countries, CARDI has been asked to take a lead role in identifying and tackling research problems, while in the larger countries its role is to complement local efforts.

In all its work CARDI attempts to avoid the unnecessary duplication of effort and to promote the transfer of technology where this is appropriate. It routinely undertakes screening of commodity lines produced by international research centres and its scientists are in touch with colleagues throughout the world. A scientific literature service was recently established to provide staff with a current awareness service and retrospective bibliographic research. This service is particularly important for staff in the smaller territories where there are minimal library facilities.

CARDI senior staff and specialists fulfill dual roles. They engage in research activities, either of an original or adaptive nature, aimed at solving particular problems, and are "resource persons" to whom on-the-spot problems are referred. The institute is presently seeking to establish a network of resource persons throughout the re-

gion, in order that fuller use can be made of individual expertise even when such people are employed in a national agency.

CARDI has a staff of 40 experienced scientists, 30 junior scientists, some of whom are on secondment from other agencies, and 200 supporting staff. Particular areas of expertise include crop protection (virology, pathology, entomology, nematology, weed science), crop production, farming systems, animal production, forage agronomy, engineering, economics and communications. The expertise of individual staff members is available to all member countries.

In its research and development activities CARDI complements the training services provided by the University of the West Indies, the University of Guyana and the schools of agriculture in Jamaica and Guyana, and the Eastern Caribbean Institute of Agriculture and Forestry located, like CARDI headquarters, in Trinidad and Tobago. Staff are located in all the member territories.

Core funding is provided on a pro-rata basis by the member countries. In addition, CARDI has been able to attract project funding—on contract—

from a variety of international sources including the International Development Research Centre (IDRC) of Canada, Barclays Bank International Development Fund, the United States Agency for International Development (USAID), the Canadian International Development Agency (CIDA) and the Caribbean Development Bank (CDB).

EDF-backed projects

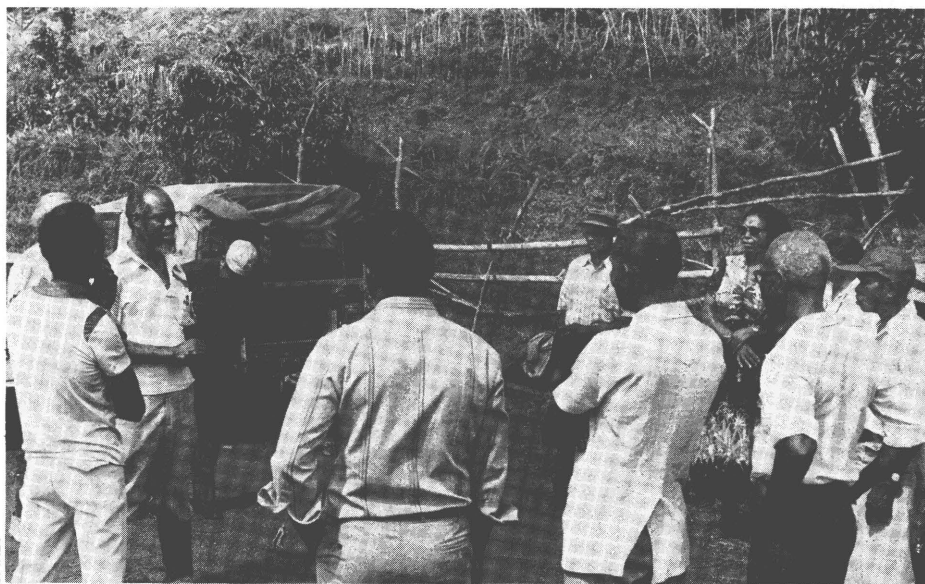
Projects financed from the fourth European Development Fund are good examples of the type of developmental research undertaken by CARDI:

Virus-tested yams

During the past two years, more than 100 tonnes of improved virus-tested yam planting material have been grown by approved growers and sold to farmers in Barbados. Supplies for propagation have also been sent to other countries in the Eastern Caribbean. This material has been shown to yield 30-40% more than commercial stocks. In addition, the yams have a low incidence of internal brown spot, a virus-induced condition which reduces the storage life of yams and had threatened the growing export market for Barbados "Lisbon" yams (*Disoscorea alata*) to Britain.

Following on basic research in CARDI funded by the UK Overseas Development Administration, this work has been financed since 1980 by the 4th EDF.

When a new tissue culture laboratory and insect-free screen house are



Agronomist Ken Buckmire (Grenada), second from left with beard, speaks to a group of farmers at a field day, which preceded the opening of the EDF-funded field station. EEC delegate Gerald Watterson officially opened the building in January 1982

(1) CARDI Information Unit.

completed, production of "A" grade virus-tested yams will be expanded from an experimental to a pilot-commercial phase. The tissue culture techniques for producing this material have already been determined. It is expected that yields will be even higher than the improved material already released and will be virtually free from internal brown spot.

The production of virus-tested clones of other popular yams, viz. the yellow and negro yams in Jamaica (*D. cayensis* and *D. rotundata*) and *D. trifida* in Guyana, is being discussed with other Caribbean yam-producing countries.

Peanut production systems

Although some peanuts are grown in the Caribbean, most are imported. Trials by CARDI in the late 1970s showed that yields of 5000 kg per ha are possible with good management. Farmers presently only obtain about 1000 kg.

With funding from the 4th EDF, CARDI is introducing the new technology to farmers in Belize, Antigua & Barbuda, St Kitts-Nevis and St Vincent. Production systems are modified in the light of experience to suit local conditions. Simple hand and animal-powered equipment for planting, harvesting, drying and shelling is also being modified and tested to reduce the labour inputs of production.

Farmers have readily accepted the new production systems and many have obtained yields of 2500-3000 kg per ha in their first year. Yields are expected to increase as farmers gain more experience with this new crop.

Improved forages

Relatively large areas of land in the drier areas of the Caribbean (less than 1000 mm rainfall) are devoted to livestock rearing. Output, however, is low (50 kg per ha per year), due to the poor quality of the natural forages.

A programme to select improved forages was started in 1974 in Antigua through the University of the West Indies, with funding from IDRC and CIDA. Since then, more than 400 grasses and legumes—both indigenous and introduced—have been screened. Management systems suitable for both small farms and for more extensive operations, using the best selections, have been formulated and tested.

Funding was provided by the EEC Commission to CARDI in late 1980 to further this work and to expand the production of seed for release to farms. During the past year, more than 300 kg of seed, principally of Guinea



CARDI

A corn and peanut drier (above) was built using local materials on Tzib's farm in San Antonio, Belize—and a simple peanut sheller has been introduced and is very popular with farmers



CARDI

grass (*Panicum maximum*), *Leucaena eeucocephala* and rabbit vine (*Neotonia wightii*) has been produced, of which approximately half has been distributed to other countries and the rest used in trial/demonstration plots on selected farms. Other recommended legumes are Siratro *Macroptilium atropurpureum*, *Desmodium* spp, *Teramnus labialis*, (*entrosema* spp. and *Desmanthus*; *Virgatus*.

In all, approximately 30 ha on 7 farms were established in Antigua. In addition, the seed production area was expanded from one to four hectares and will be shortly be expanded further. Seed production in 1981 was considerably lower than predicted, since unseasonal rainfall during the dry season resulted in vegetative growth and precluded seed production.

Giant Leucaena

Since *Leucaena* is indigenous to the area and selected forage types have given outstanding yields, it was decided to observe trial plantings of giant *Leucaena* as a source of fence posts, fuel (wood and charcoal) and emergency fodder.

Variety K8 grew significantly faster than the other four varieties and average height after 12 months was 4.3 m (13 ft), indicating that marketable fence posts should be harvestable in less than three years. The tallest trees were more than 6 m (20 ft). The spacing was 2 x 1 m, i.e. 5000 trees per hectare.

A proposal to fuel a small (1 kW) electricity generating plant with giant *Leucaena* is presently being studied by the Caribbean Development Bank.

Equipment and building

To support CARDI's outreach in its member countries funding has been provided through the 4th EDF for vehicles, equipment and field station facilities. Field stations were opened in early 1982 in Grenada and Belize, and are now close to completion in Jamaica and Antigua. Others will follow Guyana, Barbados, St Lucia and Trinidad and Tobago.

In Belize, observation trials are already under way with a number of potential oil seed crops to replace soya bean, which has not lived up to its early promise. A system of all-year-round cabbage production is also being demonstrated to local vegetable farmers.

The grant has complemented operating funds received from USAID and CDB for the study and improvement of the farming systems of small farmers in CARDI's member countries. ○

WISCO: an instrument of regional cooperation

Geographically dispersed, the 12 Caricom member states all share a need for an efficient regional transport system, be it by air—with LIAT (Leeward Island Air Transport Ltd)—or by sea, with WISCO, the West Indies Shipping Corporation.

WISCO is Caricom's official government-owned shipping company and has its headquarters in Port-of-Spain, Trinidad and Tobago's capital and main port. General manager Sherman Thomas, from Guyana, runs the daily operations of WISCO, heading a staff of 45 people including 13 on WISCO's own vessel.

1981: a 15% growth rate

In this busy little headquarters, Mr Thomas told the *Courier* in March that WISCO normally operates a fleet of four vessels—only three at the time of the interview as "business was down"—with a total capacity of 10 000-12 000 dead weight tons. Of those four vessels, only one is WISCO-owned (the "Caricom Enterprise"), the remaining three being chartered on a long-term basis.

A preliminary estimate shows that WISCO last year moved 167 500 freight tons (1) in total from all origins to all destinations, and this at a total cost of about TT\$31m. In terms of tons carried, 1981 showed a 15% increase over 1980, but as general manager Thomas pointed out, "1982 will certainly not show that level of growth; in fact our budget for this current year takes an overall growth rate of 5%". Economic conditions have indeed weakened and increasingly hamper Caricom intra-regional trade.

In 1980 WISCO started a service to Miami, which proved in Mr Thomas' view "a very exciting venture, and our company is now well established in the Miami market". In fact just over 80% of last year's total tonnage was carried on a strictly intra-regional basis, the remainder being moved to and from Miami and Puerto Rico.

Set up to foster regional trade and development, Caricom's shipping line serves all Caricom territories including the so-called LDCs, or smaller islands, which are not usually a profitable destination for a private shipping company to call on regularly. WISCO is therefore not only concerned with profitability as such, since it emphasises its service role, the "social importance of which cannot be stressed enough", Mr Thomas felt.

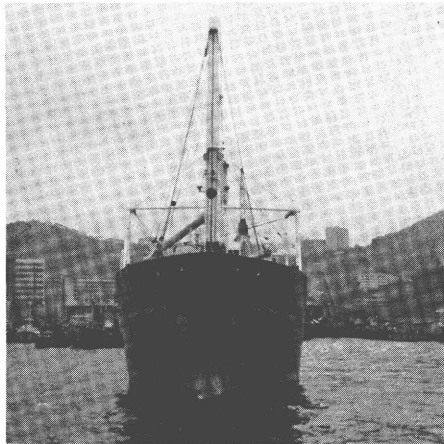
WISCO's shareholders therefore had to cover a deficit of some TT\$3m through subsidies last year, which re-

(1) 1 metric tonne = 1.4 freight tons.

presents about TT\$9 subsidy per freight ton. The doubling over the 1975-1981 period of the tonnage carried by WISCO has in fact allowed a reduction in this subsidy by more than 75% per ton to bring it down to its present level.

EDF float for more boats

Thanks to an ECU 6.3m intervention by the 4th EDF, WISCO will now be able to change the relatively unfavourable ownership structure of its fleet. EDF money will mean the acquisition of two second-hand vessels by WISCO, which will leave only one vessel to be chartered at the present rate of operations. The EDF contribution consists of an ECU 5.9m special loan (40 years loan, 10 years grace, at 1%)—to the Caribbean Development Bank, which will on-lend to WISCO (at 2% for the same duration)—and an ECU 0.4m grant for technical assistance provided directly



The "Caricom Enterprise", presently WISCO's only ship, at anchor in Port of Spain, Trinidad and Tabago's capital

to WISCO. Apart from the two vessels, it will also permit the purchase of additional containers and port handling equipment. The two vessels to be acquired and adopted to WISCO's needs in the course of 1982 are of the lo-lo (2) type, each with a capacity of

about 2000 freight tons (90 containers and 398 freight tons of general cargo).

Mr Thomas sees several technical and financial advantages in this new structure of ownership. "It will, first of all, allow better management of resources through more flexibility in cash management, because charter payments have to be made on fixed terms; secondly, the EDF contribution will allow us to reduce considerably operational charges, because when chartering vessels one not only pays the owner but also the general upkeep of the ship; last but not least, with three vessels owned, more emphasis can be put on crew training and further fostering of integration in this field".

All combined, the advantages derived from the EDF contribution will allow a reduction in WISCO's shipping costs. This leaves two issues: cutting down the freight subsidy to zero; or, if the same level of subsidy is maintained, giving customers a lower freight rate.

Improving the service

After carrying out a smooth restructuring of ownership, WISCO could go for a bigger stake in Caribbean shipping and better fulfil the needs of the region in this field.

Both the agricultural and the industrial development of the Caricom member states require adequate shipping facilities. There is an obvious need for containerization, and refrigeration for some products, as well as a better link with the smaller vessel operations and trans-shipment to ocean liners.

In the field of small vessels, called schooners, a UNDP-UNCTAD-IMCO (3) project has been launched to upgrade these. WISCO feels it should cooperate and has obtained a mandate to examine ways and means of doing so. "If that project works out well, then there will be no need for competition. We should stress the complementarity of our operations", Mr Thomas commented. These small vessels have limited operational capacities, taking on mostly break-bulk (loose cargo) work on an irregular "tramp" basis, and have so far contributed little to the process of regional integration.

By extending its ownership and carrying capacity, providing more and better containers and the proper "all embracing" equipment to handle them, WISCO will be able to provide its Caricom customers with an even better service. ○ R.D.B.

(2) Load on—load off as opposed to ro-ro—roll on—roll off.

(3) Intergovernmental Maritime Consultation Organization.

Industrial cooperation

Diversifying ACP cooperation with the EEC

An interview with Nigeria's ambassador in Brussels, Chief Peter Afolabi

► *Ambassador, is industrial cooperation with the EEC going according to plan?*

— A million dollar question! Although industrial cooperation is an aspect of the Lome Convention, I think I should point out, first of all, that our relationship is based on trade, and you cannot trade unless you produce, and in order to enrich your trade, you must transform your produce so as to enjoy the fruits of value added. Our trade with the EEC is still mainly in raw materials, the fluctuation of prices of which has deleterious effects on our economies. Of course there is Stabex, but Stabex, notwithstanding its other limitations, has helped to encourage the production of cash crops not only to the detriment of semi-processed and processed goods, but also to food production. Today, you find that many ACP states are more or less net importers of food. This is why I believe more emphasis should be placed on industrial cooperation. There are certain basic industries where we think we have a comparative advantage and which could be developed to our mutual benefit. What we see today is non-associate countries taking advantage of these possibilities in the Community. When you examine closely the percentage share of our exports of industrial products, it is so marginal that there is nothing to sing and dance about, and this strengthens the critics of Lome, who see it as a kind of neo-colonial economic pact. So, I feel an increase in exports of our industrial products to the Community is necessary to diversify our cooperation with the EEC. The Commission would tell you that it has spent much on the industrial development of the ACP states. I agree, but a closer look reveals that this has been mostly on ports, roads etc., and they do not go deep enough, to the roots of the matter, in an effort to establish a realistic basis for industrial development in the ACP states.

► *If I understand you correctly, Stabex, in your opinion, has an adverse effect on industrial cooperation and prevents the ACP states from fully util-*

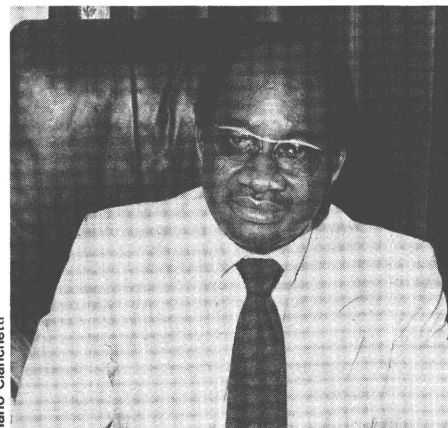
izing the accessibility of their industrial products to the Community market as provided for under the Convention?

— What I am saying is that I am one of the critics of Stabex. Stabex is meant to give a kind of partial insurance in bad times to compensate exporters whose raw materials have been badly affected by weather. But this is more or less having a negative effect on the production of our basic needs. There is now a tendency to concentrate on mono-cultures which are essentially for export. Stabex would be more meaningful if it included processed and industrial products. We are not asking for outright indexation, which is the most equitable thing. Stabex has fostered a kind of illusion that leads to the exclusion of essential factors which ought to be taken into consideration in agricultural production. If you look at the food situation in many ACP countries it remains very insecure, it is worse in a lot of countries. Rice imports alone represent as much as 24% of their total imports. And yet, some of these countries ask for Stabex. To do what? Support export oriented agricultural sectors? If Stabex can be extended to processed or semi-processed goods, which will lead to basic industrialization, that is alright.

A strategy of export orientation has helped many countries to reap the benefits of value added. Once you have an industrial base your dependence is reduced in many respects. This is why I feel that Stabex is one of those means to increase the dependence of the ACP on the EEC and a way out is to consolidate and improve industrial cooperation not only limiting it to production for domestic consumption but going as far as marketing externally with a firm commitment from the EEC, at least, to take some shares.

EIB intervention "too narrow"

► *You hold the view therefore that the EIB and the EDF interventions in the ACP states should be mainly in the export-oriented industrial sectors?*



Mario Cianchetti

Chief Peter Afolabi

— The interventions of the Commission and the EIB should not be limited to export-oriented industrial sectors. It should take into account the overall economic and industrial growth and social development of ACP states. What we find is that the EIB shies away from competitive industries; that is, industries that can easily compete, in the light of comparative advantages existing in ACP states, with European industries. We have, as a result, been rather critical of these limitations on the powers available to the EIB. Where they intervene is very narrow, it is not wide enough, because they tend to protect even declining industries in the Community. I have not seen where the EIB has helped textiles, footwear or electronic industries, although they offer assistance for small-scale industries that are not competitive.

► *The ACP-EEC Joint Committee on Industrial Cooperation was given additional responsibilities under Lome II. To what extent is it meeting this challenge?*

— The Committee for Industrial Cooperation has been strengthened in its functions. It is unlike other committees, because it is a joint one, chaired by an ambassador of an ACP country on one side and co-chaired by a member of the Council, that is an ambassador of the Council, on the other. Its areas of activity has been extended to include, at least twice a year, consultation and discussions on industrial growth, the possibilities within the framework of the Convention, in the Community and in the ACP states, and assessment and appraisal of the impact of certain industrial policy measures taken by the EEC on ACP industrial development. The Committee for Industrial Cooperation has also been strengthened in the sense that the Centre for Industrial Development's budget has been increased fivefold.

This was thought to be sufficient. I do not know whether the real issue is the funds, or whether a kind of guarantee scheme for investors going to ACP countries, should not be given priority and serious consideration?

Growing awareness of need for more funds

The budget made available to the Centre so far is insufficient. Fifty per cent goes to the payment of salaries and other administrative matters, the remaining 50 % cannot make an appreciable impact, thus the Centre appears more or less like an information centre. They cannot do much, as they are hampered by the fact that there is no concrete cooperation or liaison with, for example, the EIB or even the Commission nor access to investment funds. Where they locate investors from Europe, or in Africa, they come across the question of money. They do not have the necessary support and yet people tend to be critical, both of the Committee on Industrial Cooperation, and of the Centre, ignoring the fact of lack of finance that limits CID's capacity and ability.

There is the awareness, fast growing now, that there is a need for additional financing for industrial cooperation, otherwise the chapter on industrial cooperation will be completely meaningless and remain a dead domaine. At the moment the usefulness of the chapter is marginal. We have so far gained nothing from it except a series of studies carried out, a mounting spate of visits to ACP countries, and the rather uncoordinated advice to ACP investors and economic operators.

► *You mentioned the difficulties the CID is facing at the moment. Do you mean that the expectations of the CID should not be too high under Lomé II?*

— Nobody should expect the moon, or expect to reap mangoes where he grows maize. That is the case with the Centre. The Centre has been strengthened financially, but it is still not enough. It therefore does not have the capacity to do as much as the objectives outlined in the Convention. It is thus most unfair to be critical of the Centre!

"The Afolabi fund"

► *With regard to additional funds, what happened to the idea known as the "Afolabi fund"?*

— I thought I had mentioned, in view of the gaps we found in Lomé, that there should be a kind of bank or a fund to support industrial cooperation between the ACP and EEC, to act as a

guarantee scheme or an incentive to small-scale and medium-scale investors. What happened was that our European partners could not accept or more precisely, could not understand the basis for this request. The outcome was the eruption of the idea of an agricultural centre, as a kind of panacea to our needs, and the setting up of a group of experts to study in detail the need for additional financing for industrial cooperation.

The experts have made their findings known and the Europeans have not agreed with some of the rationale of the conclusions. There is a divergence of views between the ACP and the EEC on the conclusions. We feel that there should be closer cooperation between the Centre for Industrial Development, the European Investment Bank and the Commission. At the moment there are gaps. The EIB works independently of



Mario Cianchetti

"There are certain basic industries where we think we have a comparative advantage and which could be developed to our mutual benefit"

the Centre. The Centre, with the small funds it has, spreads too wide; it cannot cover everything. The Commission keeps its funds for basically for industrial infrastructure such as roads, bridges etc.

► *Notwithstanding the existence of the ACP-EEC Committee on Industrial Cooperation, in what way or ways is the CID being made accountable to the rest of the ACP?*

— The Committee on Industrial Cooperation is supervised, under the Convention, by the Joint Committee of Ambassadors. The ACP Committee of Ambassadors supervises the sub-committee of the ACP on industrial cooperation. The Centre is accountable to the Committee on Industrial Cooperation which, by the process of delegation of powers, is in turn accountable to the Committee of Ambassadors and to the Council of Ministers. There is also an advisory council, which, from time to time, looks at problem areas and pro-

vides new ideas for the Centre. It also considers the annual report and the budget of the Centre. We on the Committee on Industrial Cooperation act on the comments and recommendations of the advisory council in these matters. Although the Council plays an advisory role to the Centre, the latter is by implication accountable to the former i.e. the Council.

Sub-regional intra-ACP cooperation

► *Is there any programme for intra-ACP industrial cooperation?*

— Of course. The thrust of the Georgetown agreement is south-south cooperation. So far cooperation in this perspective remains difficult to be globalized under the umbrella of the ACP. But on a sub-regional basis this is going on, and I can cite the example of ECOWAS, which has gone a long way towards regional integration. Industries have been sited on criteria of the integration process and I quote the example of the sugar factory located in Benin in which Nigeria has substantial interest and guarantees up to 100%. A market is guaranteed for the products in Nigeria.

Between, Africa and the Caribbean and the Pacific such interaction is not yet organized, but our immediate concern is to find ways and means of exchanging goods and experts, and will depend on the coming into being of the ACP Chamber of Commerce and future programmes of the ACP Committee of intra-ACP cooperation. This is the point of departure for our independence in the economic and commercial fields.

► *How do you view the attitude of the European Parliament and the Consultative Assembly on industrial cooperation?*

— I must say very cooperative. Within that framework we have debated industrial cooperation at length. In Luxembourg, last year, the Consultative Assembly decided to set up a group to study and report on the impact of the chapter on industrial cooperation on ACP states. Nigeria happened to be the chairman of this working group, and we have held two meetings. A French Socialist MEP is the rapporteur. From the first synopsis I think we will come out with something quite critical of the industrial policy of the Community, in particular, in delicate, complicated and sensitive sectors. It is clear that our share of the Community market for industrial products is very very marginal leaving more than 95% of our exports in the form of raw materials. ○ Interview by A. O.

Financial and technical cooperation

The ACP viewpoint⁽¹⁾

by Francis G. OKELO (*)

Mutual cooperation at all levels has become an intrinsic characteristic of our increasingly interdependent world. But perhaps even more essential is financial and technical cooperation among nations, developed and developing. Cooperation between the ten member states of the European Economic Community (EEC) and the sixty-one African, Caribbean and Pacific (ACP) states has been defined and enshrined within the legally-binding Lomé Convention. Both Lomé I and II attribute a central role to financial and technical cooperation.

The Lomé I Convention set out the purpose of financial and technical cooperation as that of correcting "the structural imbalances in the various sectors of the ACP states' economies". The cooperation shall relate to the "execution of projects and programmes which contribute essentially to the economic and social development of the said states". (Art. 40). In Article 91, the second Lomé Convention states that "the objective of financial and technical cooperation shall be to promote the economic and social development of the ACP states on the basis of the priorities laid down by those ACP states in the mutual interest of the parties".

The following conclusions can be drawn from a reading of the two articles quoted above. First, the economic and social development of the ACP states is the primary and overriding target of financial and technical cooperation within the Lomé Convention arrangement. In other words, the interest of the ACP states is the guiding factor in any decisions affecting such cooperation. Second, the ACP themselves determine the needs to be served by the financial and technical resources. Third, appropriate channels or procedures must be devised to ensure the practical realization of the aim and objective of financial and technical cooperation. Fourth, financial and technical cooperation is a practical, pragmatic and con-

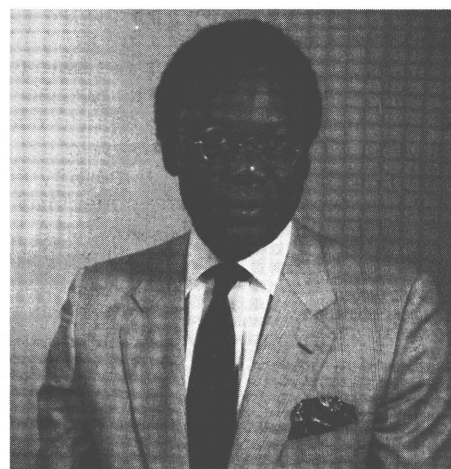
crete exercise. It involves the utilization of resources and skills in bringing about projects and programmes beneficial to the economies of the ACP states.

From a theoretical standpoint, the aim of financial and technical cooperation as envisaged by the Lomé Convention is laudable indeed. But how has this objective been realised on the practical level? How effective have the measures been in implementing the stated objective? It is the view of the ACP states that performance in this regard has fallen below the stated intentions. The principle culprit for this assessment is the cumbersome, protracted and tortuous procedures currently followed by the Commission in respect to the conception and preparation of projects all the way down to the initial stages of project implementation. The extremely low rate of the commitment and disbursement of the resources of the European Development Fund (EDF) is a clear reflection of the unsatisfactory state of affairs.

The financial resources available under the 4th EDF of the Lomé I Convention amounted to ECU 3 464.4 million, and are broken down as follows:

Type of Assistance (2)	Breakdown of Funds (MEUA)
Grants	2 149.8
Special loans	445.6
Stabex	380.0
Risk capital	99.0
	074.4
EIB loans	390.0
Total	3 464.4

(2) Commission report to the ACP-EEC Council of Ministers on the administration of financial and technical cooperation in 1980, under the Lomé Convention (Table III-annex).



Francis G. Okelo

Resources administered under the 4th EDF also include interest on funds deposited ECU 36.0 m, and reconstituted Stabex resources ECU 3.5 m.

The Lomé I Convention was in force from 1 April 1976 to 29 February 1980. According to the Commission's 1980 report, 90% of the 4th EDF resources had been committed as at 31 December 1980 and over 53% of those commitments were disbursed. Over the same period, the European Investment Bank (EIB) committed the whole of its financial aid provided under the Lomé I Convention, comprising subsidised loans from its own resources and the transactions in the form of risk capital.

These percentages are, however, global in the sense that they include Stabex transfers, exceptional aid, and interest rate subsidies. If these are excluded, commitments would stand at 87% while disbursement in relation to project-related commitments amount to about 37%. The Commission regards the time-lag between commitments and disbursements as "perfectly normal and common to all sources of financing, regardless of the type of project or its location". While this may be true, the fact that 9 months after the expiry of Lomé I only 87% of the programmable aid had been committed and only 37% actually disbursed is a great cause of concern to the ACP states. Furthermore, while there has no doubt been some progress, the ACP note with regret that of some fundamental problems, difficulties and bottlenecks which confront them in the implementation of financial and technical cooperation still remain unresolved. Let's look at some of them.

First, programming. Within the meaning of Article 91(1) of the Lomé II Convention, the selection of projects

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(1) The views expressed here were first considered in the ACP sub-committee on financial and technical cooperation. They were subsequently submitted through the ACP Committee of Ambassadors, to the ACP Council of Ministers in December 1981 where they were adopted as a basis for discussion in the ACP-EEC ministerial committee established under article 108(6) of the Lomé II Convention.

and programmes for EDF financing is the responsibility of the ACP state concerned so long as these projects and programmes tie in with its economic objectives and priorities. In practice, however, this principle has not always been observed. The Community apparently reserves to itself the right to call for a post-programming review of any project or programme "if a majority of the Community members states feel, after seeing the indicative programme, that there should be an exchange of views on its contents and implications". This "right" not only touches on the sovereignty of the ACP states in the choice of projects and in sectoral allocation of resources in accordance with their priorities and objectives, but it also raises grave doubts as to the effective status of the programming exercise itself and inevitably causes delays. It is difficult for an ACP state to proceed to the next stages of project preparation and submission when the conclusions of the programming mission are not firmly respected. Decisions arrived at during a programming mission should be final unless altered or revised by the mutual consent of the ACP state concerned and the Community.

Second, project preparation and appraisal. The ACP fully recognizes and appreciates the value and importance of project preparation and appraisal. While the identification and preparation of projects and programmes remain their exclusive responsibility, they nevertheless are prepared to request for technical assistance from the Community for this purpose, if they so wish. The ACP, therefore, endorses the Commission's view expressed in its 1980 report on the administration of financial and technical cooperation that "the quality of execution (of projects and programmes) depends closely on the quality of appraisal, and (that) a carefully prepared project is usually carried out satisfactorily". Again, in

practice, there are problems. The Commission's requirements, or more accurately, lack of precise requirements for project preparation and appraisal poses severe problems to the ACP. There are too many requests for too much detailed information., often of a kind which is not easily available or has very little relevance to the technical evaluation of a project or programme in question. This causes delays.

Furthermore, the Community gave an assurance to the ACP early in 1980 that information on particular projects or details on project dossiers would be sought through the ACP diplomatic missions as well as through the Commission delegates. But the tendency to regularly bypass these missions in Brussels for information often available there, or in certain cases to communicate directly to the authorities including heads of state or government in ACP capitals regrettably appears to continue.

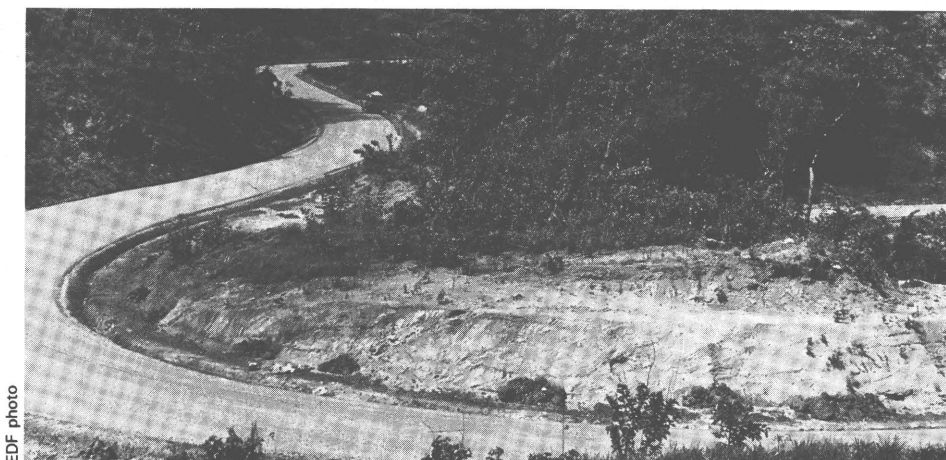
Third, project implementation. Problems, including delays, in project execution can be attributed to three causes: a) the nature of the project itself; b) the ACP states themselves; and c) the procedures followed by the Commission. Some projects, for example, agricultural projects have long gestation periods or changing seasons; major projects funded by complex co-financing arrangements require lengthy appraisal and study before implementation; and adverse political circumstances in an ACP state retard project execution. Some of the difficulties encountered are technical in nature and are not easily amenable to solutions, for example, the selection of consultants, preparation of plans and specifications, selection of tenderers and concluding contracts and so forth. These problems are real, and both the Commission and the ACP states agree that they need to be carefully analysed and tackled.

The ACP states too, are to blame for certain delays in project execution. The Commission has noted cases where eight months elapsed before an ACP government made its choice of consultants from a proposed short-list. Inter-ministerial rivalry within the ACP government for priority projects or bureaucratic delays in the submission of project proposals—these slow down the process of project implementation. While criticism may, therefore, be levied against the Commission's procedures in the interest of improving them, the ACP states themselves should examine their internal procedures with the same end in view.

In the view of the ACP states, a number of specific actions need to be taken to improve the implementation of projects. These include: a) the abandonment by the Community of the economic viability and profitability criteria in the appraisal of EDF aid programmes, and the adoption of criteria according to needs, priorities and development levels of the ACP states. Thus project evaluation criteria should take more into account social benefits, indirect effects and longterm effects of the projects; b) the intervention by EDF and EIB committees in the financing decision process should possibly be phased out; c) the Community's insistence on prior approval or clearance at practically every stage of project implementation process should be relaxed and greater trust be reposed in the ACP states; d) Commission delegates in ACP capitals should be granted greater decision making powers so as to shorten the consultation process; and e) the machinery for payments should be overhauled.

Fourth, technical cooperation. The ACP fully recognizes the value to them of technical cooperation. They have derived great benefits from scholarship awards, training courses, the secondment to them of experts, advisers, technicians and instructors. But there are a number of shortcomings that still need to be removed: a) the Community's general partiality for EEC technical assistance personnel financed by the EDF; b) the cumbersome procedure for the selection of consultancy firms; c) the excessive cost of technical assistance; and d) certain defects in the terms of reference given to consultants. Some of these shortcomings were discussed at the ACP-EEC Council of Ministers' meeting in Nairobi in May 1980. And the ACP is pleased to note that some remedial measures have been taken.

Fifth, regional cooperation. The use of the EDF regional cooperation fund is a matter of continuing concern to the ACP. The most salient case in point is



EDF photo

An EDF-financed road in Cameroon. "Some projects have long gestation periods"



FAO photo

Mechanized farming in Uganda—the objective of financial and technical cooperation is to correct the structural imbalances in the ACP states' economies

the tendency on the part of the Commission to approve financing from the regional fund of seminars and other activities promoted by European interests without prior or adequate consultations with the ACP group in Brussels, which is often informed in the last minute when preparations are already well advanced. And yet there are several regional projects submitted by the ACP which appear to be stalled within the Commission services. It would be most desirable if the ACP committee of ambassadors in Brussels were, in principle, effectively consulted well in advance of any commitments against the regional fund.

Lastly, the ACP feel that the Community development aid is perhaps too heavily oriented towards project assis-

tance as contrasted to programme aid. The ACP endorses in this context, the views of Mrs Katharina Focke, expressed in her report to the ACP-EEC Consultative Assembly, that project aid and programme aid "are not genuine alternatives in that there is a third solution which aims to support both programmes and the projects embodied in them. This solution would combine the elimination of the cumbersome procedures with the maintenance of the rules of sound management for cooperation. Steps should be taken in this direction under Lomé II and a new model might thus be developed".

The ACP views regarding the implementation of financial and technical cooperation under the Lomé Conven-

tion may appear to be critical, but they are made in goodwill and with one aim only in view: an improved and more effective use of the EDF resources. It is, therefore, gratifying to note that the ACP-EEC ministerial committee established pursuant to article 108(6) of the Lomé II Convention discussed these problems very candidly both at the ministerial and the authorized representatives' levels. The comprehensive resolution of the so-called article 108 ministerial committee adopted unanimously by the recent ACP-EEC Council of Ministers' meeting in Libreville, is a very encouraging sign that both the Community and the ACP states are determined to tackle head on the problems hindering a more satisfactory implementation of title VII of the Lomé II Convention. ○ F.G.O.

The case for relaunching Europe

an interview with Pieter Dankert,
President of the European Parliament

"Président crédible", "reforming Dutchman", "political pin-up", "charmeur", "un nouveau Monsieur Europe", "jugendliche, gutaussehende Holländische defense intellectuel", "un socialiste à Strasbourg", "représentant typique de l'Europe de la deuxième génération" — these are some of the ways the European press described Pieter Dankert when he was elected President of the European Parliament on 19 January. Dankert may be all these things, but he is much more than that, as his first six months as leader of the European Parliament have shown.

This new job, for which he has developed a sober style perhaps typical of the northern Netherlands, has raised him to the ranks of the European leaders. He wants to take the pulse of an ailing Europe and diagnose what really is wrong. This is a topic which he has covered in powerful speeches, witty and not without irony, on the deadlock in which Europe is now trapped.

Piet Dankert recently launched the idea of another conference in Messina (Italy), like the one in 1955 which paved the way for the original Community of the Six, to get the EEC out of this imbroglio. He points to the fact that Europe's institutions do not function properly and he is determined to get the Parliament at least to play its rightful role, so it really can go out and meet the European voters in 1984.

With his natural allies from Benelux (Leo Tindemans, current President of the Council of Ministers, and Gaston Thorn, President of the Commission), Mr Dankert wants to find out what sort of Europe the member states are aiming for and see how far this corresponds with the ideals of the founders of the Community.

In this interview, Mr Dankert develops these ideas and reflects on Lomé policy and its possible evolution.

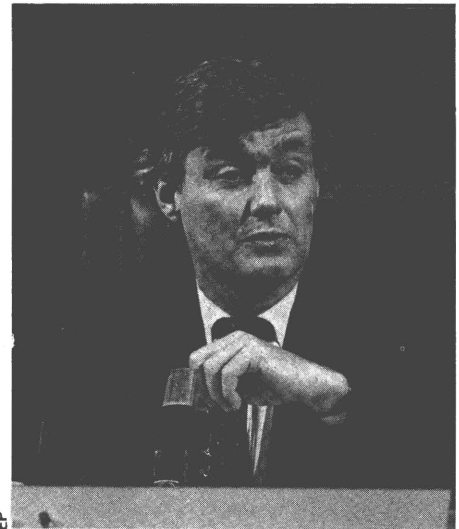
Caught in the European deadlock

► *During your first few months as President of the European Parliament, what impressions have you formed about the organization and internal workings of the institution and what do you think about its external role?*

I shall take internal functioning first, where one or two limited improvements have been possible. We have changed the way the plenary sitting works and we are now pruning the agenda for it. There are changes, not enough of them, because what we really need—and there is agreement on the principle here—is a reorganization of the secretariat, which is still not in line with what this Parliament needs. Discussing this is always difficult because the interests of so many people are involved, of both MEPs and, most important perhaps, Parliament staff. A certain amount of reorganization will be possible, I hope; but, for the moment,

resistance to my original proposals is fairly strong. We shall see. I think there is a fairly general desire to see things reorganized, so we have to do as much as we can.

The Parliament's external role, I think, very much depends on the general situation in the Community. Particularly when it comes to public opinion, the European Parliament is caught in the deadlock we have in the Community at the very time we are trying to increase its weight in the institutions as a whole. Take relations with the Commission, where, since direct elections, Parliament's hold has increased considerably. I think things are working reasonably well from that point of view, but the problem is that the Commission is restricted in inter-institutional relations for the very simple reason that there is far too much emphasis on the relation between the Commission and the Council—I am thinking of the majority vote on farm prices here—which is perhaps something that was



Pieter Dankert

"The main problem is that the provisions of the Treaty of Rome... are not being applied"

not provided for in the treaties. That is where the problem lies.

"This Parliament is not able to function properly"

► *The recent vote on farm prices for 1982-83 made a hole in the unanimity rule—which is still a good one as far as some of the European leaders, echoing the Luxembourg consensus, are concerned. What do you think about this and about the way the European institutions operate today?*

— I have already said that I feel the real problem for this Parliament is that the provisions on institutional and inter-institutional operation in the Treaty of Rome are not being applied because of the Luxembourg agreement of 1966. I would go so far as to say that this agreement is less bad than the present situation, in which almost everything is done unanimously, as the Luxembourg agreement is in fact only an agreement to disagree. It provides procedures that attempt to solve problems. But these procedures are not being used at the moment.

The treaties were written before the so-called Luxembourg agreement and, if the majority vote on farm prices heralds a return to proper application of the treaties, then we should be talking about a historic decision. The Community can only make real progress if we go back to majority decisions. What we have to do now is see whether the vote on farm prices was anything other



The last European Council in session. "Cooperation between the Council and Parliament cannot come to much when unanimity on the Council is essential"

than an accident. As you know, some member states do not want to see the Luxembourg agreement endangered, in spite of their attitude in the Council on agriculture. Above all, we have to wait for the outcome of the discussions of the foreign ministers on the Genscher-Colombo proposals.

This Parliament was directly elected in June 1979 and this is important, because you can't have direct elections without direct consequences on the way things work; otherwise parliamentary democracy in the whole of Europe suffers. But, as things stand, this Parliament is not able to function properly.

Practically speaking, it was unanimity that played the big part, and this is worrying as far as Parliament's position in the long run is concerned.

► *Perhaps also because the European Parliament lacks power?*

— Yes, but only partly that. If the provisions of the Treaty of Rome were applied by the Commission, I think we would have a proper role in the Community decision-making process. But because the idea of unanimity prevails in the Council, the Commission—and the Parliament therefore—cannot function as they are supposed to. Hence this institutional problem. I have to say that, as far as the Council is concerned, or some of its members at least, there is a certain desire for improvement. However, as long as unanimity is the rule in the Council, improvements can only be sought through procedures that are informal and not very transparent and which amount to very little in the end because cooperation between the Council and Parliament cannot come to much when unanimity on the Council is essential.

The consequences of direct elections

► *One of the ways out of this problem, as you mentioned in your inaugural speech, seems to be greater contact between the European Parliament and the different national parliaments, which can have direct influence over the Council of Ministers.*

— One of the negative consequences of direct elections is that relations between Euro-MPs and national MPs (and prior to 1979 they were one and the same, European MPs were always national MPs) have disappeared. Only one or two Euro-MPs have kept their dual mandates—although I don't really see how they can do both, what with their incredibly heavy timetables in the European Parliament and at home. All this has resulted, in a broader political context, in a certain amount of nationalization and renationalization of European policy, as opposed to the European aspect of the European Parliament itself, and there is no useful interplay between the two. So it is essential to improve contact and make sure that European problems are understood, at least, at national level. And we must try and use this national channel to have a certain amount of influence over any decisions taken in the Council. It's no easy matter, because as long as unanimity is the rule, there will always be some member states that don't want the Parliament to play an important role in this Europe of ours. They may have helped create this Parliament with direct elections, but they don't really want to see it have a proper role in the Community. This is why I say that direct elections are dangerous if you won't accept their logical consequences.

Not enough European decisions

► *So isn't the crisis in Europe perhaps also, maybe above all, the crisis of the member states? There are some fields, unemployment for example, where things seem to be left to the member states.*

— Yes. But at the same time, these member states are proving incapable of overcoming the crisis. Everybody, even the European Council, says we need European or international solutions to problems of this kind. And since we are unable to manage European decisions, we are still disappointing public opinion, and that is what makes Europe unpopular. So you have to be very careful when you are in power, like the people on the European Council are, to suggest that what we need is a European solution and to go on complaining about the lack of European decisions and solutions.

► *Must we conclude that the leaders of Europe are not interested in building Europe?*

— I don't know. I think we have to say that those European leaders, who, politically speaking, are dominated by the national considerations in the financial and economic circumstances of today, do not dare take the decisions that are vital to create Europe, to make it progress or even to save what we already have.

Political cooperation goes hand in hand with economic integration

► *The EEC is an economic giant in the world today, but in spite of one or two developments, isn't it still a political dwarf? And how can it play a bigger part in the international scene?*

— It may be a political dwarf, but the member states through the committee on political cooperation, or through the Franco-German twin town system or even individual countries like the United Kingdom, to cite a few diverse examples, certainly do carry some weight on the international scene. But Europe as such has scarcely got organized yet. I have the impression that at the very moment when the policy of integration and progress in the Community is facing problems, there is a trend to greater political cooperation. But I think that these two things have to remain linked. You can't have a common political policy unless there is a common basis of integration to support it. What strikes me most is that those member states that are the least keen on integration, generate the most



Strasbourg, 15 January 1982 — Piet Dankert is congratulated by Egon Klepsch, whom he beat in the fourth round of the presidential vote. Simone Veil, Dankert's predecessor, has her back to the camera. Below MEPs burst into applause as the result is announced



political cooperation. One of the aspects of the European problem at the moment is not just a matter of finance and economy, I think, but the fact that the people of Europe realize, to an increasing extent, that they have a special European role to play as far as foreign policy is concerned, and if this link with the progress of the Community can be made, I think it would be very useful if we devised and developed our foreign policy and our defence policy too.

► Is that Piet Dankert, the former NATO defence expert talking?

— Yes. I did once have a lot to do with the military side of Atlantic cooperation, but now, in this present job, I am obviously much more inspired by

economic cooperation and so I am more concerned with the consequences of our policy of economic integration on both the other developed countries and the countries of the Third World. And it goes without saying that we have to formulate a foreign policy for Europe in the light of these economic relations.

Messina II for practical initiatives?

► A short while ago you lunched the idea of another Messina conference to relaunch the European idea. Is this likely to be a practical proposition in the near future and what guidelines could Messina II lay down for Europe?

— I think that Messina I, if I can call it that, which was behind the construction of Europe, has to be considered as the first effort to launch the institutions of Europe. Times have changed and what Europe needs now is something that will make for greater integration, something that will make the general public think of the Community as an essential part of their everyday life once more. And this is why I think that, when we talk about another Messina conference, we have to look to practical steps in the field of economic and social policy first. For example, we need practical measures to combat unemployment via a joint approach on the part of all the member states. And we also need ways of boosting our monetary cooperation to avoid any widening of the already considerable gaps between the different member states.

► So Messina II has to be a European think-tank, perhaps, to see how we can move forward.

— Think-tank if you like, but at the same time we want decisions. The member states have to combine forces to reach conclusions. I think one of the problems of the Council of Ministers is that it doesn't really have the time to deliberate properly. The members only take a decision on dossiers that have already been prepared in great detail. Everyone agrees now on the need for certain things to be done in the fields I have already mentioned. What we have to do is take several days and use them to discuss whether we can't find ways of breaking the deadlock.

► When do you expect Messina II to actually happen?

— I wouldn't like to mention dates, but I think that it shouldn't be delayed too long.

Is there an alternative to Lomé II?

► In a few months, you will be joint president of the ACP-EEC Consultative Assembly for the first time. What do you think about Lomé II and how do you think it should evolve?

— The Dutch have always been fairly critical of Lomé I and II. The place the developing countries occupy in European relations has improved under Lomé II, but we have always regretted that the advantages of certain of the systems in the agreements, such as the Stabex, only apply to a limited number of countries. There are countries in Asia, for example, which should also get the benefit of them—although this would be fairly difficult to organize. I think we should look at Lomé policy and ask "what is the alternative?"

And clearly, compared to Japan and the USA, for instance, Europe does a great deal. But improvements still have to be made to this system—which, in spite of all the critics say, is positive.

► *You have just mentioned the Netherlands' world-wide approach—but this year, for the very first time, the European Parliament has given in to the Council over aid to the non-associated developing countries and got less than was originally considered to be a minimum.*

— Yes, but our problem is that, because of the budget and the margin we have for manoeuvre, we are too tied to be generous. Nevertheless, in spite of the fact that development tends to come at the end of the budget and there is a temptation to spend more at the beginning and have nothing left for the end, this Parliament has always managed to give considerable priority to development spending over the past few years. We have pushed NGO activity, for example, and we have always urged the Commission to make important proposals for aid to the non-ACP countries. I think that Parliament's conscience should be clear, but there are financial limits, and it is clear that, as things stand, there is greater pressure to spend more, particularly in European social affairs—which means for the internal affairs of the Community. So far we have managed to maintain the funds earmarked for development—although we still think they are quite inadequate, as the discussion on world hunger has proved. So practically speaking, in the budget, the European Parliament has behaved fairly reasonably towards the developing countries.

► *I gather you have in fact already referred to what should happen after Lomé II at a speech to Amnesty International recently.*

— I confined myself to human rights issues that concerned Amnesty International. In the second Convention, people tried, unsuccessfully, to include an agreement on procedures to be put into action if human rights were not respected or were seriously or persistently violated. But it didn't work. I quite understand that the ACP group is afraid the Europeans might interfere in their affairs. I think a great deal of care is called for. But at the same time, I believe that universal attitudes to human rights are accepted in the UN and they should also be part of our system of relations with the ACP countries.

Safeguarding the values of the rural world

► *How can we ensure greater coherence between the Community's de-*



Human rights and Lomé policy — "There are universal attitudes accepted in the UN which should also be part of our system of relations with the ACP countries"

velopment policy and its other policies?

— An effort is made along these lines sometimes—I am thinking in particular here of the change of direction in the food aid policy where the Community is now mulling things over and where there is a tendency to confirm the swing away from getting rid of agricultural surpluses such as dairy products, towards providing aid in the light of the need to develop food production in the developing countries. The main problem is in industry, the multifibres agreement for example, particularly bearing in mind the difficult situation the Community is in at the moment. So it is very difficult to get from the North-South dialogue the sort of conclusions that are satisfactory from the point of view of the developing countries.

► *Before you became President, you made a European reputation for yourself in budgetary and above all agricultural policy matters. How do you see the problem of rural development in the developing countries?*

— That's a very difficult question. I am not really an expert, but I do think that everyone agrees that rural development in the developing countries is one of the keys to their problems. And that is where the Community comes in. I don't think—and I am following Commissioner Pisani here—that we should try to get the developing countries to mechanize completely, to go in for large-scale agricultural structuration. The values of the rural civilization have to be safeguarded while the sector is developed.

► *But what practical results do debates like the one on hunger in the*

world that the European Parliament organized lead to? What are they aiming at?

— The debate on world hunger was on the whole of our policy towards the developing countries if you like and it is the best debate we have had. Now as to rural development in particular, I think Parliament shares Mr Pisani's desire to link food aid to the possibilities of rural development. This means the EEC countries have to be much more careful about their policy as regards such things as food aid, as it has been organized up to now.

Getting the European machine working again

► *How do you think the Parliament could inject a political content into the formal legitimacy it received from the European voters in 1979, and whom it will be consulting again in 1984?*

— The political content is already partly there because the Parliament's main role is to keep a check on the EEC Commission, to exercise democratic control over everything that goes on at European level, to assess it and to make any criticism before adopting it. This is a job we can do, but the difficult thing is that, because of the non-functioning of the Community and its institutions, we have to take steps to get Europe going again at the same time. We were talking about world hunger just now, so in certain sectors an effort has already been made and something should come of it. But in other sectors—particularly the key field, social and economic affairs—the general public does not yet see us as "the" Parliament that can deal with the problem of unemployment, say. And it is in that sector above all that a considerable effort will have to be made in the very near future.

► *You criticise the way the institutions work. You complained that the Commission did not make take-it-or-leave-it proposals to the Council, as it did in the era of Hallstein, Mansholt and so on.*

— Indeed. I understand very well that the Commission is in a difficult situation. But it also has a political responsibility as far as Europe is concerned, and it is often unable to exercise this responsibility because it takes into account what seems to be feasible in the Council. Now the Commission has at last taken a very courageous step as regards the majority vote on farm prices, and I hope this will get the wheels of the European machine turning again. ◊

Interview by R.D.B.

Book about Europe

Michael KIDRON and Ronald SEGAL — **Atlas encyclopédique du monde** — Calmann-Lévy — Bfrs 752 — 1981

The authors have written their own introduction: "This atlas is in the rich tradition of the political atlases that emerged from war and the threat of conflict and the interest this generated in military strategy and the deployment of armies, a trend which, with time, expanded to include socio-economic and cultural aspects.

Like its predecessors, this atlas seeks to satisfy a need for information and interpret modern fact by looking at subjects that are in the public eye. It sets the changing course of events in a context that makes it easier to understand. It throws light on links that are obscure in themselves or have been deliberately masked. Our presentation has the advantage of being easier to understand than the usual tables and texts.

We go further than previous works by giving the atlas a genuinely international dimension, showing not just what effects individual events have on the international community but tracing the underlying causes—the vested interests of the sovereign, aggressive and expansionist states. It is true that, in its time, the nation-state has enabled individual liberty and material progress to be increased, but it has also encouraged oppression of the individual, collective violence and the squandering of economic resources. We say that the destructive aspects of the state are much greater than the constructive ones.

In part one, we show the proliferation of states in recent decades. We see how they, with their rivalry, are trying to claim the last uninhabited areas, the high seas and the cosmos. And we look at the state's military ambitions, the waste when resources are channelled into war, the threat of conflict and the preparations for it.

The power of the state is not just the power of arms. We show how the various countries have an unequal share of natural resources, how they themselves have created others, how they have exploited their possibilities and the links that unite them to the influential areas of private industry and high finance. Then we look at the repercussions of all this on employment, on society in general and on the environment, before going on to the symp-

toms of crisis and determining some of the problems facing the system.

Most of the information on the maps comes from government sources or international organizations, often the only available source of statistics".

ooo

The Economy of the European Community — Office of Official Publications of the European Communities — 112 pages — 1982

The countries of Western Europe have, in the vast economic entity that they are forming, the most solid assurance of lasting prosperity. For the rest of the world, an integrated European Community is a key factor in the establishment of a new international economic order.

However, economic arguments and the dynamics of economic forces are not enough in themselves to make countries embark upon the course of true integration; it was an awareness of economic needs coupled with a political will that inspired the Treaties of Rome, an original approach to the creation of an economic community which had no precedent in history.

This booklet gives a comprehensive description of the European Community which, over a quarter of a century after the signing of the European treaties, has become a reality, despite the difficulties confronting it in a troubled world.

It shows how the Community is approaching the task of achieving fuller integration, with the ultimate aim of economic and monetary union.

It gives a general account of the progress that has been made to date and the tasks that lie ahead.

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Philippe MOREAU DEFARGES — **Les relations internationales dans le monde d'aujourd'hui — Les dérivés de puissances (International relations today — The power game)** — Preface by Thierry de Montbrial — Les éditions S.T.H., 6 av. Léon-Heuzey, 75016 Paris, France — 352 pages — 1981

In this work, Philippe Moreau Defarges takes an overall look at latent and open rivalries in the world today. He examines both international data and regional conflict, giving an insight into the different diplomatic ap-

proaches and the processes by which they clash and turn to struggle or negotiation.

This book is the first for many years to analyse all the components of the international system and, most important, to bring out the actions and reactions of the "tragic interplay of politics and power" where, as Raymond Aron said, "no one can be content before the final day of reckoning".

So a historical approach enables us to understand the most recent facts and to ask the most urgent questions for the immediate future.

The author, who studied at France's Ecole Nationale d'Administration, has considerable experience of European matters and international relations. He works for the French foreign ministry and is director of studies and reader at the Institut d'Etudes Politiques in Paris.

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EEC Official Publications Office — **Index of Community legislation in force, second edition, drawn up by the European Communities in six Community languages** — 742 pages — Price of volumes I and II (the set) — Bfrs 500 — 1981

The European Communities' aim in bringing out this index of Community legislation was to meet a common request and provide the public, and the legal profession in particular, with an easy-to-use guidebook.

This is in line with what the institutions have done so far to facilitate access to Community law. The proliferation of this legislation led to the Official Journal being split, in 1968, so that a separate edition could be devoted to Community legal texts and to a Community law data base enquiry system (accessible through Euronet) being set up.

The index has been designed with the needs of the reader in mind, in particular of members of the legal profession who do not normally have to handle Community law; so the arrangement is an analytical one, the references are listed by subject and only current legislation is included.

The second edition of the index deals with laws in effect on 1 January 1981. This includes:

— mandatory legislation derived from the treaties establishing the three European Communities;

- supplementary legislation;
- Community agreements with third countries.

The analytical section has an alphabetical index of key words and an index of document numbers in chronological order. The references to texts covering a number of topics are, of course, included under all relevant headings. Any changes to texts made prior to 1 April 1981 are also given and mention is made of the law by which the amendment was made and the date of publication. Most publication dates refer to the *Official Journal of the European Communities*.

The work is in two volumes. The first contains the analytical list of laws, the alphabetical index and one or two details for the reader. Volume two contains the chronological index.

The index is brought up to date every year. This edition appears in all the Community languages but Greek.

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Antonino PITRONE — **The EEC GSP scheme in the '80s** — Preface by W. Haferkamp, Vice-President of the EEC Commission — Publisher: European News Agency, Bruxelles 1981. (Available in French and English) — 307 pages + annexes (150 pages) + appendix (300 pages) — Price: 12,600 FB — 1982

This is the most complete study available on this subject at the moment. Prepared by a customs expert, it presents and analyses in detail the former system and its results, in order to make clear the main changes made by the EEC to the system that will be in operation during the '80s.

The author, who has written several previous books on the Community generalized preferences scheme, gives for the first time a general picture of the schemes of other industrialized donor countries and compares the systems of the USA, Japan and the EEC.

Specific chapters are devoted to the preferences applicable in Greece, to the special arrangements for China and Romania, to the position of Yugoslavia and the ACP countries, to the question of Bulgaria's inclusion and to the special EEC import provisions for handicraft products and handloom fabrics. There is also a chapter dealing with the rules of origin.

The study contains not only the texts of Community regulations, but also tables indicating the reintroduction of duties on beneficiary products from 1971-1980, this data being vital for planning by economic operators.

In the preface Mr W. Haferkamp describes this study as "a particularly useful contribution to a better understanding of the scheme and to its optimal utilisation" and as work "capable of meeting the needs both of the interested trader or specialist and of the public at large".

In a word, here is an essential reference book for all who are concerned with the Community's GSP.

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Poètes et Poésie d'Europe 1950-1980 (Poets and Poetry in Europe 1950-1980) — The European festival of poetry 1980 — Volume 1: Essais recueillis et introduits par Eugène Van Itterbeek (361 pages) — Volume 2: Poèmes recueillis et introduits par Eugène Van Itterbeek (434 pages) — Association Européenne pour la Promotion de la Poésie ASBL (Boskantstraat 30, B3200 Kessel-Lo/Leuven, Belgium — 1981

These books cover the 20 countries of the Council of Europe. The volume of essays gives an overall view of 30 years of poetry in Europe while the volume of poems contains works by between two and four poets from each country. Those poems originally in a germanic language have been translated into a latin language and those originally in a latin language have been translated into either English or German. These two volumes will be followed by a third containing works in non-official languages.

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R.M. CHECALLIER and D. MAIDANI — **Guide pratique Article 117 CEE (A practical guide to EEC article 117)** —

Office of Official Publications of the European Communities (Luxembourg) and its offices — French only — 136 pages — 1982.

Article 177 of the EEC Treaty provides that the Court of Justice of the Community is competent to make a preliminary decision concerning interpretation of the Treaty, one of the most remarkable innovations of the Treaty of Rome in comparison with national legislations. Now, French magistrates and lawyers have shown a certain reserve in using this procedure. This practical guide enables magistrates and auxiliaries of justice to acquaint themselves with all the particularities and implementation of preliminary procedure. The authors — Roger-Michel Chevallier, professor at Strasbourg and Luxembourg and Dominique Maidani, a lawyer in Luxembourg — emphasise that more frequent referral of

French cases will enable the Court of Justice to use more frequently French jurists' methods and reasoning: the enrichment will therefore be mutual and the influence reciprocal.

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Under the direction of J.P. SIEMERS and E.H. SIEMERS-HIDMA — **European Integration: Select international bibliography of theses and dissertations** — Preface by Dr Ralf Dahrendorf. Martinus Nijhoff Publishers (P.O. Box 566, 2501 CN The Hague, Netherlands) — 412 pages — second revised and enlarged edition FI 240 (\$99) — Introductory texts in English, German, and French — 1981

This second edition of the bibliography lists some 2.230 theses and dissertations on European integration, compared to 1.217 in the first edition, which was published in 1979. The systematic table of contents has been improved and the keyword index has been enriched. This indispensable tool for researchers has been developed by J.P. Siemers, Deputy Head of Library Commission of the European Communities, and E.H. Siemers-Hidma, Documentalist-Librarian.

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Christian PHILIP — **Les Institutions européennes (the European institutions)** — Masson, 120 bd St. Germain, 75280 Paris — 223 pp — 1981

The rector (président) of the French Université du Maine (Le Mans), Mr Philip, has written a clear and useful roundup of the EEC institutions as part of a series of textbooks for students of law and economics. It is well set out, gives all the information needed for a working knowledge of the Community and sketches the wider perspectives from a position of neutrality.

Mr Philip's brief conclusion looks at the wider aim of political union from the standpoint of history, pointing out that the Community is still in its relative youth, and warns that integration has often been achieved in the past after its necessity has been learned the hard way. Political will is essential if the Community is to develop positively. Historians may argue that it is a fallacy to interpret the present in the light of the past, since the study of history works in the reverse direction, but Mr Philip is recording a background rather than analysing an epoch. The clarity and comprehensiveness of his textbook should ensure it a long life.

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FAO - J. Van Acker

The tropical forest

The tropical forest is being exploited commercially (top photo) and may be damaged or even destroyed unless proper safeguards are applied, with serious effects on agriculture (erosion), society (rural drift) and the ecology (drought in previously protected areas). Above: the long walk to fetch firewood

● Reading their textbooks in the 1950s, schoolchildren in the tropics found unflattering descriptions of the forest with which they were familiar. The descriptions reflected the dim view taken by the textbooks' authors of the state of development of tropical countries and their peoples. Things have changed markedly since then. Tropical forests have become natural resources, like mines. Men, money and machines have poured in, and after only a few decades there is serious anxiety about the survival of the natural forest cover, together with the way of life it supports. The tropical forest is no more empty of human civilization than the deserts or cold regions of the world.

The forests and their ecosystems constitute a fundamental natural factor of stability.

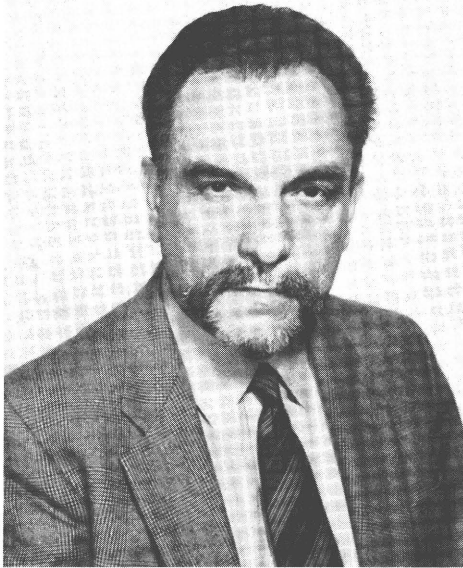
Despoiling them, at whatever economic gain, can have serious and long-lasting effects on the ecology and human life they support.

This dossier outlines the general problem of the tropical forest; its role in the economy of the tropical countries and in trade with importers of tropical timber; and reforestation, with specialized articles from Rome (the FAO), Paris (the CTFT) and Oxford University. Case studies give examples of the forestry situation in the various ACP regions, and we describe the European Community's activities in this area.

To quote professor Leroy of the National Museum of Natural History in Paris, "the march towards disaster" must be halted.

Tropical forests: facts and perspectives

by J. PRATS LLAURADO (*)



J. Prats Llaurado



Slash and burn agriculture (above, in Indonesia) can accentuate deforestation and impoverish land, which is abandoned as soon as its fertility drops, even if it is a lesser enemy of the forest than commercial tree-felling (photo: Cameroon)



FAO - H. Mill

FAO - P. Vaughan-Whitehead

What is the area covered by the world's tropical forests? How fast is it diminishing? In what manner and why are these forests shrinking and deteriorating? These questions can be answered today more accurately than ever before, as a result of a recent in-depth study which provides an unprecedented wealth of information on the forests and forested areas in the tropics (1).

The answers to these questions in turn can help determine what to do to harness the potential of the tropical forests for the social and economic development of the countries which possess them, while at the same time averting irreversible damage to the environment in these countries and in the world at large.

This applies in particular to the ACP states, since 58 of them, out of 61, lie on the intertropical belt: 39 of these states, accounting for about 95% of the area and about 98% of the population of the whole ACP group, are among the countries covered by the FAO/UNEP study, which reflects, almost completely, the various forest types and the range of socio-economic situations prevailing in ACP states.

(*) Director, Forest Resources Division, Forestry Department, FAO.

(1) "FAO/UNEP Tropical Forest Resources Assessment": a joint project of the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP) in collaboration with national institutions. Project results cover 76 tropical countries, comprising over 97% of the total area of countries lying totally, or mostly, between the tropics. FAO, Rome, 1982.

Forest areas and deforestation trends

The tropical forest formations of the world are very varied, but for the sake of simplicity they can be grouped in *closed forests* that form a continuous, often multi, storied canopy, up to 50 m high and grow in areas of high rainfall; and *open forests* that occur in areas of low to medium rainfall and are composed of trees up to 20 m tall, usually intermixed with grass. In addition, there are *shrub formations* of woody plants up to 8 m tall, growing in arid and semi-arid zones, and *forest fallows* which are found mostly within the closed forests and result from vegetation regrowth on areas cleared for shifting cultivation and then abandoned (2). Over the years these fallows, if undisturbed, tend to recover to the appearance of the primeval forest.

In 1980 the arboreal and shrubby tropical formations, plus the forest fallows, covered about 29.7 million km². Their distribution by categories and regions is given in table 1. The world's closed and open tropical forests were being deforested at the annual rates of 0.62% and 0.52%, respectively (3). The striking similarity of the rates of deforestation by regions shown in table 2 should not hide the marked differences that exist between individual countries and between sub-regions. For example, the annual deforestation rate for the closed forests of West Africa is 6%, or

(2) *Shifting cultivation* — This expression designates agricultural systems under which crops are cultivated temporarily on plots cleared in forest areas, usually by the slash-and-burn method.

(3) *Deforestation* — As in the FAO/UNEP study, this term means total clearing of natural forest formations for any purpose, including shifting cultivation, although in this case there is normally a regrowth of woody vegetation.

Table 1
Tropical forest formations
(million km² in 1980)

Tropical Regions	Forests			Forest Fallows	Shrublands	Total
	Open	Closed	All			
Africa (37 countries)	2.2	4.8	7.0	1.7	4.4	13.1
America (23 countries)	6.8	2.2	9.0	1.7	1.4	12.1
Asia (16 countries)	3.0	0.3	3.3	0.8	0.4	4.5
Total (76 countries)	12.0	7.3	19.3	4.2	6.2	29.7

Source: FAO/UNEP Tropical Forest Resources Assessment.

Table 2
Tropical deforestation
(in thousand km² and in % of surface per year)

Tropical Regions	Closed Forests		Open Forests		Total	
	Area	%	Area	%	Area	%
Africa (37 countries)	13.3	0.61	23.5	0.48	36.8	0.52
America (23 countries)	43.4	0.64	12.7	0.59	56.1	0.63
Asia (16 countries)	18.2	0.60	1.9	0.61	20.1	0.60
Total (76 countries)	74.9	0.62	38.1	0.52	113.0	0.58

Source: FAO/UNEP Tropical Forest Resources Assessment.

six times higher than the comparable rate for East Africa (including Madagascar) and 30 times higher than that for Central Africa.

In the ACP countries in 1980 there were about 2.8 million km² of closed forests and 4.1 million km² of open forests being deforested at the annual rates of 0.46% and 0.53%, respectively. Table 3 gives further details for these countries, classified in broad ecological groups. A marked difference can be noticed between the lower deforestation rates shown for the group of "humid" countries, compared to those shown for the other groups.

The establishment of forest plantations in tropical countries is far from making up for deforestation losses. These countries have about 115,000 km² of plantations and are adding to them some 11,000 km² per annum. It can be expected that tropical forest plantations will increase faster in future, but the average ratio between planted and cleared areas still remains at 1 to 10 and replacement plantations are not necessarily established where they are most needed.

The systematic overview provided by the FAO/UNEP study has shown that on the whole, tropical deforestation is

Table 3
Forests and deforestation in ACP states

Tropical ACP states (Broad ecological groups)	Forest areas in thousand km ²		Deforestation % of surface per year	
	Closed	Open	Closed	Open
Predominantly humid (1)	1 153	47	0.07	0.02
Humid/dry (2)	1 153	1 525	0.73	0.56
Predominantly dry (3)	89	2 247	0.87	0.53
Mountainous and small insular (4)	55	285	0.42 (6)	0.44 (6)
Total tropical ACP states (5)	2 850	4 104	0.46	0.53

(1) (12 states): *Congo, Equatorial Guinea, Fiji, Gabon, Guyana, Jamaica, Papua New Guinea, Solomon Islands, Surinam, Trinidad and Tobago, Vanuatu, Western Samoa.*

(2) (13 states): *Benin, Cameroon, Central African Republic, Ghana, Guinea, Guinea Bissau, Ivory Coast, Liberia, Madagascar, Nigeria, Sierra Leone, Togo, Zaïre.*

(3) (17 states): *Botswana, Cape Verde, Chad, Djibouti, Gambia, Kenya, Malawi, Mali, Mauritania, Niger, Senegal, Somalia, Sudan, Tanzania, Upper Volta, Zambia, Zimbabwe.*

(4) (16 states) *Burundi, Ethiopia, Rwanda, Uganda, Barbados, Comoros, Dominica, Grenada, Kiribati, Mauritius, St. Lucia, St. Vincent and Grenadines, Sao Tome and Principe, Seychelles, Tonga, Tuvalu.*

(5) Excludes ACP states outside the intertropical belt (3 states): *Bahamas, Lesotho, Swaziland.*

(6) For the four mountainous countries only.

Source: FAO/UNEP Tropical Forest Resources Assessment for the countries in italics, and complementary information available with FAO for the others.

not proceeding as rapidly as some published estimates would have it. However, it has drawn attention to the many areas in which the tropical forests are critically threatened and has clarified the nature and the relative importance of the principal human activities that endanger them.

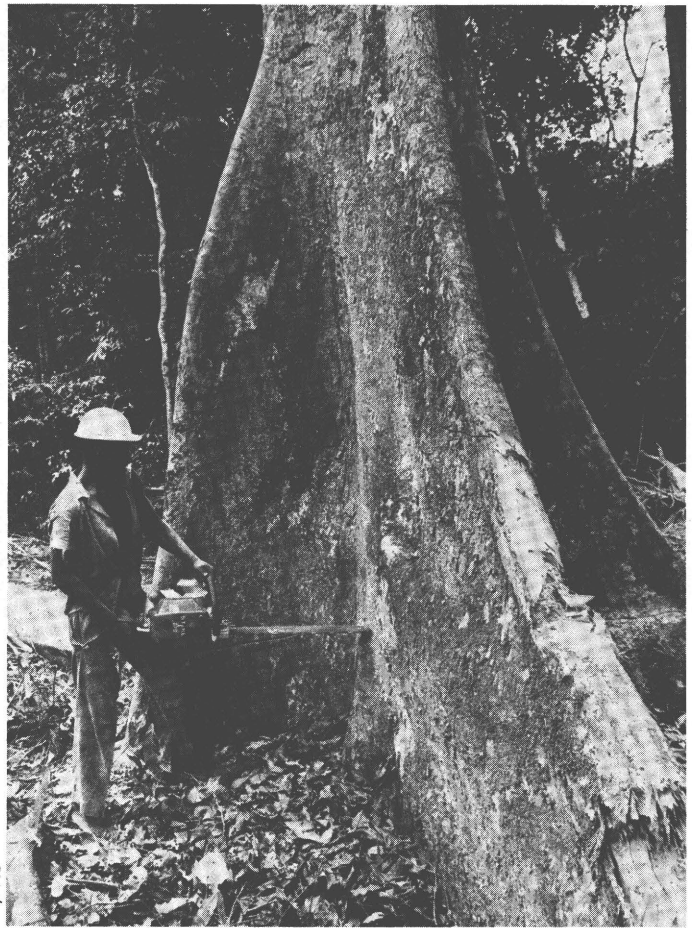
The agents of deforestation

The area of closed forests cleared yearly is roughly equivalent to that of the Benelux countries. Nearly half of it goes to shifting cultivation and will, for the most part, accrue to the existing forest fallows, without irreparable ecological damage if not cleared again too soon. This may well be the case where old forms of shifting cultivation continue to be practised for subsistence by sparse populations who know the forest well. Today, however, many shifting cultivators shorten the fallow periods because of land scarcity, or because of changes in their needs and perceptions. In addition, more and more newcomers, often unfamiliar with the forest milieu, are brought into the forest through settlement schemes, or look for land on their own for cropping or grazing. The spontaneous inflow of squatters, a major reason for deforestation, is often triggered by logging operations.

Selective logging of scattered trees of commercial value does produce temporary damage, but it does not in itself irreversibly affect the environmental values of the forest. On the other hand, intense or careless logging can irreparably degrade the environment, particularly on steep slopes or in fragile ecosystems such as the mangroves. Even light, selective logging can impoverish the genetic information stored in the forest.



The forests are under attack, whether large-scale or in minor ways, even where their preservation is vital, as in Chad (above) or Central Africa (opposite)



UN/FAO

Because of their remoteness, large parts of the Amazon and Orinoco basins, Guyana, Suriname, Gabon, Congo, south-east Cameroon, south and east Kalimantan and central Zaire, form today the core of the little-populated, closed tropical forests of the world. Many similar forests in West Africa, the Philippines, Thailand and other areas have been cleared in the last decades. Today many of the countries endowed with such forests are keenly aware of their unique value and have adopted new policies for their protection and management, although they often lack implementation means. At the same time, sizable parts of the closed tropical forests are being, or will be, opened up, and should be used as grounds to test ecologically acceptable criteria and methods of organized agricultural colonization. These testing grounds include infrastructural developments such as the Trans-Amazon highway, the completion of the Pan-American highway in the Darien (Panama), and the extensions of the Trans-Cameroon and Trans-Gabon railways. There are other situations from which experience should be systematically gained, for example the transmigration programme in Indonesia, the Mahaveli irrigation project in Sri Lanka, the rubber and oil palm plantations in Peninsular Malaysia and the Caqueta and Putumayo settlement schemes in Colombia. Lessons should be drawn also from the consequences on the forests of mineral oil finds such as the ones in north-eastern Ecuador and in the Selva Lacandona in Mexico.

The threats to the open tropical forests and shrublands, although less publicised than those to the closed forests, appear to be more severe. In the tropical formations on dry or relatively dry lands, no major natural obstacle prevents the spread of human populations with their herds, their ploughs and axes and the fires they provoke. These formations lack the resistance to widespread fires, the comparative impenetrability and the regeneration capacity that most closed tropical forests have.

Most of the deforestation and degradation occurring in the open tropical forests and shrublands is caused by excessive grazing and browsing, by removal of wood for fuel and charcoal beyond what regrowth or replanting would permit, and by fires lit for grazing, clearing or hunting.

The problems associated with fuelwood scarcity are par-

ticularly important (4). Finding wood to cook their food or to keep warm is the real energy crisis for three-fourths of the population in developing countries. In Africa, fuelwood and charcoal are the largest sources of energy for cooking, heating and drying. This accounts for over half of total energy consumption and for 90% of wood consumption. In the developing countries of Asia, fuelwood and charcoal account for 36% of total energy consumption and 90% of wood consumption. Making the charcoal for the needs of the city of Bangkok alone requires three million m³ of wood annually. Over-exploitation of fuelwood resources can lead to the destruction of the tree cover and threaten the environmental stability, which is essential for maintaining and increasing food supply.

Most ACP states classified in table 3 as "dry", "mountainous" and "small insular" suffer from acute fuelwood scarcities, while deficit situations occur in large areas within most of the "humid/dry" states.

Growing population pressure

Natural disasters such as outbreaks of insect attacks, hurricanes and volcanic eruptions do contribute to the deforestation and degradation of tropical forests. However, in recent years the damage caused by natural agents, by wanton logging or by war, have not approached at world level the impact made by the shortening of fallows in shifting cultivation, excessive firewood removals, over-grazing and widespread forest and bush fires. Two important points must be noted about these poor man's land use practices. The first is that they are necessary and logical to the eyes of those who

(4) The information on the fuelwood supply and requirements situation comes from a global reconnaissance survey carried out by FAO and presented in the form of a "Map of the Fuelwood Situation in Developing Countries", FAO, Rome, 1981.

Table 4
Population densities
(inhabitants per km²)
in 1980

Regions	Total population density per km ² of			Annual growth (1975-80) %	Agricultural population density per km ² of			Annual growth (1975-80) %
	Total Area	Arable Land	Forest Land		Total Area	Arable Land	Forest Land	
Tropical Africa	16	246	49	2.95	11	176	34	2.09
Tropical America	19	296	36	2.89	7	95	13	0.93
Tropical Asia	134	442	375	2.48	85	286	239	1.53
Total	40	362	100	2.63	24	219	60	1.58

Source: FAO/UNEP Tropical Forest Resources Assessment and FAO Production Year Book (1979).

conduct them, who do not have, or do not know of any acceptable alternatives for survival. The second is that the effects of these practices on the tropical forests tend to worsen with population increases.

Table 4 provides a general indication of existing and potential population pressures over land in the tropical world, although it should be noted that situations vary greatly from country to country. In the case of the 61 ACP states, the whole group has an average population density of 16 inhabitants per km². Average density is about three times higher for the small insular states, with differences within this group ranging from seven to eight inhabitants per km² in the Solomons and Vanuatu, to above 500 in Barbados.

Population pressure is bound to increase further in the tropics, as suggested by the high growth rates given in table 4. The demand for food and agricultural products in developing countries is expected to double by the year 2000 (5). The repercussions of this over tropical forest lands are so widespread and are becoming so acute in many areas that they can neither be interpreted solely from a forestry point of view, nor faced with traditional forestry measures alone. For example, general economic and trade policies quite unrelated to forestry can lead to the conversion of forests into export-oriented farms and plantations to produce commodities such as cocoa, meat, rubber or palm oil.

The role that both the humid and the dry tropical forest formations play most frequently at present is that of a safety valve to cope with food needs, or with other basic needs, of local people. This is exemplified by the many millions of people living on shifting cultivation, or depending on fuelwood for cooking and heating. At the same time, sizable forest areas in the tropics are giving way each year to new settlements for agriculture and grazing, often because the settlers cannot make a decent living elsewhere.

Support for food production

Forests and forest trees will have an increasingly important place in the tropical countries' endeavours to increase food and agricultural production. Firstly, because forests and trees can contribute more than in the past to enhance the production capacity of existing farming and grazing lands. Secondly, because more food can be produced inside the forests themselves.

(5) "Agriculture toward 2000", FAO, Rome, 1981.

The FAO study "Agriculture toward 2000" indicates that the bulk of the growing demand for food will have to be met by increasing production on existing agricultural lands. Forests are essential to support agricultural production by ensuring a regular flow of clear water from catchment areas to rivers and irrigation dams. Forests and forest trees also support agriculture in many other ways, from fixing moving sand dunes to sheltering crop land against winds and checking soil erosion. All these functions are well recognized, but more should be done, principally in water catchments and in arid and semi-arid zones, to make forests and forest trees play their full role in the rural environment. Countries such as China, India, Korea, Ethiopia and Senegal have gained much experience in "village forestry", involving multipurpose communal plantations, shelter belts, rows of trees along roads and canals and groves on individual farms.

Selected forest areas can be converted to food production, depending on whether good soils exist and can be identified and released for permanent agriculture or pasture. Forest land evaluation should help to do this, but spectacular results on a large scale are not to be expected. The characteristics of most forest soils in the humid tropics put serious economical and ecological limits on the development of agriculture and livestock. Agroforestry systems and the management of forest wildlife, fish and food plants could offer better prospects for producing more food within the forest milieu without significant environmental disturbance. These are innovative avenues to follow, by learning from the traditional forest dwellers and shifting cultivators and by imitating nature itself.

Other contributions to development

If tropical forests and forest plantations must contribute to both the "horizontal" and the "vertical" expansion of the agricultural frontier, they must also provide a sound resource base for the forestry sector of the economy. The total forest product exports of developing countries were valued at \$8.600 million in 1980, but as much as 44% of that amount came from roundwood exports. In the year 2000 these countries are expected to increase greatly the proportion of exports and earn a substantial trade surplus in this sector. This will require harvesting species currently under-used and large investments in industrial plants and forest infrastructure. Investments will be needed also to meet higher demands in domestic markets, adding stimulus to the creation of jobs. Thus, appropriate forest-based industries

can contribute to socio-economic development and become an important tool for the management of tropical forests. Another key socio-economic function of tropical forestry will be that of producing fuelwood. By the year 2000 the minimum requirements in developing countries are estimated to reach 2.600 million m³. For many of these countries it will be impossible to meet national fuelwood requirements unless they manage their forests with this purpose in mind and step up drastically their plantation programmes of fast-growing species. Where it is abundant, the tropical forest biomass can supply energy to areas where fuelwood is scarce. For example, it would be economically feasible to supply the town of Ouagadougou in Upper Volta with charcoal from fuelwood surpluses in the Ivory Coast.

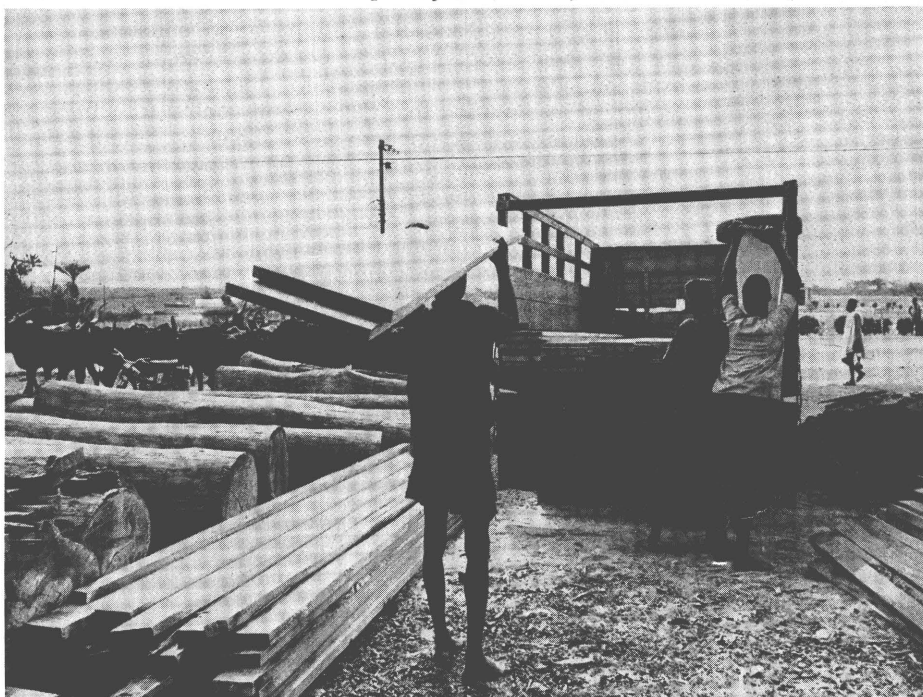
Technological advances can diversify the tropical forests' production potentials. Pulp is already being produced from mixed tropical woods in a few large plants in Brazil, Colombia and Cameroon. Competitive production of liquid fuels from the tropical forest biomass is still some way off technologically. In the future, this type of energy, together with gaseous wood fuel and charcoal, can become significant in national economies.

Thus, in order to meet both foreseeable basic needs and economic demands, production from the tropical forests must grow. However, only about 2% of these forests are managed at present with suitable manpower inputs, organization and infrastructure, and their management rarely aims at well-balanced, multiple objectives. Forest management must be intensified and diversified, and new forest resources must be created through plantations to help supply industry, contribute to rural development and also ease pressures on natural forests, such as those resulting from excessive fuelwood removals.

Protection of the environment

The international concern about the fate of the tropical forests has centred on the weakening of the environmental services they render. In many of these forests the objectives of environment protection and resource preservation must indeed exclude other objectives, or clearly prevail over them. For example, this will be so, to varying degrees, in strict

Timber production is steadily falling in Nigeria due to lack of reforestation (photo: exports from Ibadan)



nature reserves established for the conservation of particular ecosystems and genetic resources, in protected areas such as national parks and equivalent reserves and on the biosphere reserves established under Unesco's Man and the Biosphere Programme. In many other forests, however, their role in soil, water, climate and genetic conservation can be made compatible with their production and social roles. The extent of these forest areas and the complexity of the social and economic issues at stake may make it difficult to harmonize these simultaneous functions. For instance, conflicts may arise between the immediate interests of the populations that depend directly on a forest for their livelihood, and the longer-term concern of society at large about the value of the same forest for environmental protection. This may warrant the transfer of resources and expertise within tropical countries to people living in or near certain forests. More broadly, this should attract support from the international community to tropical countries in their efforts to manage and to expand their forest resources.

In the light of this, the wealth of information provided at world level by the FAO/UNEP study should not be left to stand as a once-only effort. FAO and UNEP deserve encouragement in using the data and methodology of the study as the starting point for building up, with the countries concerned, a permanent monitoring system for the tropical forests, and ultimately, for all the forests of the world.

Working with the people

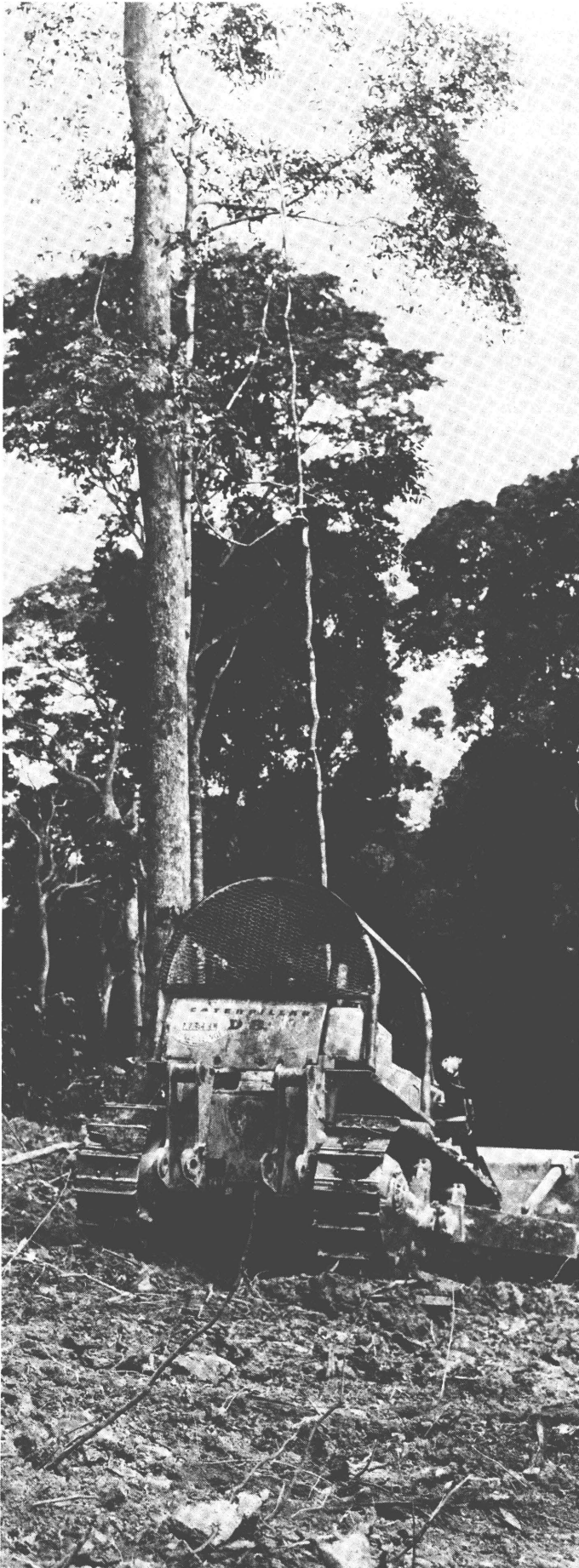
What to do with the forest resources and potentials must be an essential topic of national development policy for all tropical countries, whether they are well or poorly endowed with forests today. Active and purposeful plans for the management of existing forests and the establishment of forest plantations must replace the residual and passive roles to which most forest areas have been relegated in the past.

The nature of the tasks ahead requires, above all, stepping up the transfer of initiative to rural communities and individuals, men and women, to increase their participation, with dignity and equity, in forestry work and in the benefits derived from it.

The long search for firewood in Mali, a desert country in the north: the development of solar or wind power could help save the little remaining vegetation and spare the women an exhausting chore



WFP/FAO



Centuries-old forests can be destroyed in a few weeks. A different forestry policy must be adopted...

There is encouraging progress today along these lines. In forestry, as in other fields of socio-economic development, the failure of actions built on a technocratic contempt of the ordinary people is being recognized. The philosophy of man's unlimited control over nature is being discarded as incapable of controlling its own excesses. There are more and more decision-makers, planners and technicians who understand better the rural people's needs and perceptions, respect their cultural identity and learn from their traditional wisdom in dealing with nature.

The "Jakarta Declaration" of the 8th World Forestry Congress enshrined the concept of forestry for people. The FAO's "Forestry Strategy for Development" reflects the desire of member countries for a new human and social dimension of forestry. Forestry research is paying more attention to the contribution of forestry to rural development, to the interdependency between forestry, agriculture, energy and conservation, and to the understanding of the basic natural and human factors that underlie man's impact on the tropical forests.

These trends go together with many innovative efforts in practice. To mention a few there is, for instance, the dialogue between foresters and women's groups on fuelwood production and use in the Sahel; or the multipurpose forest management being introduced in Ghana and in the Casamance region of Senegal, combining timber and charcoal production and agroforestry; or the transfer of experience on communal and social forestry from Asia to tropical, America and Africa.

To support and broaden these efforts, there is a need in many countries for institutional reforms to facilitate the rural people's equitable and orderly access to the land, encourage their self-reliance and support their own forms of association. There is also a need to strengthen the administrations, enterprises, and training and research facilities that deal with the management, creation and use of forest resources.

To solve common problems the countries in the tropics could well reinforce their mechanisms for cooperation, particularly those that already deal with forestry, such as the permanent Inter-State Committee on Drought Control in the Sahel (CILSS), the Association of South-East Asian Nations (ASEAN), or the African Timber Organization.

The tropical forests hold a challenge and a promise that will test the political will and the means of governments in tropical countries, and the determination and industriousness of their peoples. These countries can be supported from outside with full respect for their sovereignty. The wealth of information that has recently come to light bears out the widely shared concern about the environmental damage that could result from continued tropical deforestation. Not just out of generosity, but also out of self-interest the international community should step up its support to the tropical countries in eradicating hunger and malnutrition, fighting poverty and stabilizing their forms of land use with higher productivity and better adjustment to conservation standards. The concept of conservation as the management of the biosphere for the greatest sustainable benefit today, while maintaining its potential for the future, has received worldwide acceptance (6). However, the world should also remember the dilemma in which many developing countries find themselves. As Indira Gandhi put it, "for us who live in underdeveloped countries and are grappling with the age-old problems of poverty, the conservation of the environment cannot be at the cost of development." (7). ○ J.P.LL.

(6) "World Conservation Strategy". International Union for the Conservation of Nature and Natural Resources (IUCN).

(7) "Mazingira", Volume 5/2, 1981. Pergamon Press, Oxford, UK.



Professor Duncan Poore

The forest and human well-being

“ People should understand what its importance is for them ”

Interview with Professor Duncan Poore

Mr Poore, of the Tropical Forestry Department of Oxford University, explains the important economic and ecological role of forests and the dangers of their destruction.

► *Professor Poore, in your view as a scientist, what is the importance of the forest to human well-being?*

— I think the forest has very great importance for human well-being. This is really twofold. First because of forest products, particularly timber, which is of enormous importance to all countries. In the developing world the wood, of course, is also used as firewood and this is absolutely vital for the well-being of these peoples. But apart from its value in producing things, the forest itself has an enormous importance in the maintenance of soil cover, in the catchments of river basins, the regulation of waterflow, and probably in the moderation of extremes of climate.

► *What are the main physical and climatic threats resulting from the reduction of the world's forests?*

— I think the most important and dramatic is probably the erosion caused on steep and unstable slopes if forests are removed, where they are not replaced with some other form of vegetation which holds the soil in place. This is very important in almost all the mountain regions of the world. The Mediterranean, for example, was stripped of its forests and lost a great deal of its soil a long time ago. This process is now occurring in the tropics and in the big mountain ranges of the world, such as the Himalayas and the Andes; they are becoming stripped of their forests and losing their soil, which reduces their own potential to produce either timber or food crops. It also leads to severe problems in the river basins below—siltation, the danger of floods and so forth.

Local or even global climatic change

There are also questions of local or even global climatic change. This is a very complicated subject, and no one is very sure of their grounds. But it does seem that if forest is removed and what replaces it is very different in its physical characteristics, this may lead to changes in the heat balance above the surface of the earth and to local changes of climate. If the forest is stripped over a large areas, particularly in the subtropical zones of the world; there is at least a possibility that the changes in climate may be more than local; they might have regional effects, and, some people suggest, global effects.

► *In the case of the Caribbean, for example, do you think the frequency of hurricanes is due to deforestation?*

— I should think probably not. I'm really not very sure, but I think the hurricane is a regional climatic phenomenon,

which conceivably might be aggravated by deforestation locally but almost certainly occurred even when the Caribbean was well covered with forest.

► *But if the tree-cover of the Caribbean zone was still as extensive as it was, do you think the damage caused by hurricanes would be less than what it is today?*

— I don't think removing the tree-cover has altered the severity of the hurricanes. But it does appear that natural forest, because it evolved in a hurricane region, is better able to withstand hurricanes than some of the other things that are put in its place. In Jamaica a couple of years ago, for example, I saw a hurricane track; the local hill forest was very little affected but plantations which had been put in its place had been knocked over like matchwood. This is the price one may have to pay for which is more productive and immediately useful than the natural forest, which has a rather low productivity of timber. So one has to balance costs and benefits here.

Farms or forests?

► *To what extent is the loss of tree-cover due to the introduction of modern economic systems, and especially of the extensive monoculture in the tropical zones?*

— I think that the reduction of tree-cover is due to a whole number of different factors, and it varies from one part of the world to the other. You talk about monoculture, and certainly the monocultures of cash crops have led to the removal of forests in certain parts of the world; for example, rubber and oil palm in Malaya, sugar cane and perhaps cattle ranching in the southern parts of Amazonia. This is important locally. But I think that it is the spread of agriculture, more generally dependent upon the rise of population, which is leading to very extensive deforestation. On the whole, the well-managed monocultures probably put back something which is much more productive than the random agricultural development which is taking place in so many parts of Central America, South America and South-East Asia, for example.

► *But don't you think the general consequences of the modern economic systems have precipitated the deforestation in the tropical zones?*

— Once people become linked to a market system there is immediately an incentive to over-produce. I don't think it's

a necessary linkage though, because high production of agricultural crops is not in itself necessarily harmful. It is when this is done in the wrong places or when the land is badly managed that it becomes harmful. So that I can't see anything which is inherently wrong in linking these areas to modern economic systems, provided the modern economic systems and techniques are used in a wise manner, to maintain productivity and not destroy the forest where it ought not to be destroyed.

► *Europe has for a long while relied on imports of tropical timber to preserve its own forests. Is this one of the major factors in the destruction of tropical forests?*

— No, I don't think it is. The imports of hardwoods from the tropics to Europe make up a relatively small proportion of the wood which is used in Europe. By far the greatest amount of timber used is softwood from Scandinavia and North America. There has however, been a steady demand for tropical hardwoods, and until recently I think that this has done very little harm to the tropical forest. What is now leading to accelerated exploitation—I won't say destruction—is the industrial conversion of tropical hardwoods into plywood and chipboard, etc. which is now very much centred in the countries of the North Pacific, in South Korea and in Japan and Taiwan. This is providing an incentive to the South East Asian countries in particular to exploit their forests at a very fast rate. And this exploitation is sometimes carried out unwisely.

People will preserve the forest "if they feel it's useful to them in some way"

Looking at the other side of the problem, I believe that a stable, sustained market for tropical hardwoods probably represents one of the best chances for the conservation of the tropical forests. People are not very happy about preserving something which isn't useful to them in some way. So if it is possible to devise sustain stable markets for these products, particularly if they can have value added in their own country of origin, this will, I think, represent in the long run the best hope for the survival of the forest.

► *How is that?*

— Well, countries will try and keep areas of indigenous forest which provide a continual yield of useful products. In that way it will remain as forest. If it is not useful, there will be a great incentive for it to be cleared for agriculture and disappear altogether.

► *Do you think the destruction of Amazonia will help maintain this very important reserve of forest resources?*

— When we talk about preserving the forest I think there are two separate issues involved. There is the question of preserving areas of forest in the original state, as a reservoir of species and genetic resources. These species may be of value in the future if not now. In order to do this, areas of forest should be set aside which are not exploited at all, and these should be very substantial areas. Brazil, for example, now has plans for doing this. That is one side, establishing nature reserves or genetic preserves. But one cannot expect any nation to leave a very high proportion of its forests completely unused in this way, just as an insurance for the future. So quite a large proportion of the forest, one would hope, would be used for production of timber or other forest products, but in such a way that it was not damaged. Then it could continue producing these products indefinitely without deterioration. So I think in talking about the destruction of the tropical forest, people often mix up these two issues.



This tree can be brought down, but its economic benefit to the inhabitants of a Solomon Islands village would be nothing compared to the cultural role it plays — a place where justice is dispensed. It is necessary to reconcile modern economic needs with the preservation of nature by replanting forests without delay

► *The forestry problem is not yet considered an international concern. Do you feel the issues are of a different kind, compared to those of sea pollution, for instance?*

— There was, of course, the United Nations conference on desertification, which dealt to some extent with these problems. I think that the future of the world's forests, and the world's forest lands, is quite as important as the problem of sea pollution. The forest lands of the world occupy about a third of the total land area; apart from their yield as a source of energy and raw materials in perpetuity, if managed properly, these forests regulate the flow of rivers, preserve soil and moderate climatic extremes. It seems to me that the management of these forest areas is of enormous importance to mankind, not only in economic terms but also in terms of aesthetic pleasure in the very broad sense.

I think the consideration of forest lands is less amenable to an international approach than sea pollution. The sea, outside territorial waters, is common. All forests are located within one nation or another and I think the rights of nations in respect of how they manage their own land surface are very zealously guarded. It is more difficult, I think, to conceive of valuable international conferences concerned with the management of forests or even with the management of tropical forests, than if one's concerned with the sea. One can't conceive, for example, of a convention on forestry, being a practical proposition.

Population growth and forest destruction

I'm not saying there is no possibility of an international approach. I think there is. I do not believe that many nations yet consider the problems of the management of forest lands and of timber as important as they do food. Perhaps this is understandable, though if you consider the indirect effects of the mismanagement of forest lands on food production, it's perhaps rather surprising. But in almost every government, forestry is treated as of lesser importance than agriculture. I think it is time that all nations began to elevate the management of forest lands to a very much higher level of national priority.

THE CONVENTION AT WORK

ACP-EEC Council of Ministers

Libreville, Gabon, 13-14 May 1982

The ACP-EEC Council of Ministers met for the seventh time in May, in Libreville. Their two-day session was preceded by the 29th meeting of the ACP Council of Ministers and the first ministerial meeting of the Article 108 Committee, a restricted ACP-EEC group meant to pep up financial and technical cooperation (1).

The ACP-EEC Council is the highest Lomé authority and theoretically reviews all aspects of the Convention at its annual meetings. In practice particular issues, usually trade questions, dominate the proceedings and settling the agenda is already a major item of business. The ACP delegates in Libreville had an incisive chairman in Mali's foreign minister, Alioune Blondin Beye. On the EEC side, both Council chairman Leo Tindemans (Belgian minister of external relations) and EEC development commissioner Edgard Pisani were attending their first ACP-EEC Council meeting. Mr Tindemans had to leave after the first day and was replaced by Mme J. Mayence (Belgian state secretary for development cooperation).

Less than half the ACP countries and nine of the EEC Ten were represented by ministers. The detailed back-up provided by the diplomatic and administrative teams allowed much ground to be covered, but there was a scramble to reach conclusions in time. The ACP Council worked late on the first two days and was still drafting its resolutions when the ACP-EEC Council was due to start. The EEC side found itself in session at midnight, after a reception, and in general the pressure of work blew the lid off the four-day timetable. At this stage nearly mid-way through Lomé II, the Libreville meeting confirmed how readily the ministers get down to business rather than standing on ceremony, even if the diplomats and the Commission still provide most of the grist to their mill.

(1) Article 108 of Lomé II states (paragraph 6): "An ACP-EEC Committee shall be set up within the Council of Ministers to study, in general terms and on the basis of specific examples, suitable measures to improve the implementation of financial and technical cooperation, notably by accelerating and streamlining procedures" ...

Mr Beye outlined the main concerns of the ACP ministers at the opening of their Council meeting. The first of these was South African aggression against the front-line states, on which he called for "the most fruitful possible conclusions, in line with the recent work of the Consultative Assembly in Zimbabwe". Turning to ACP-EEC cooperation under Lomé, he asserted the value of the Convention "despite its inadequacies and imperfections" at a time of international economic crisis, and stressed its role in both North-South and South-South relations.

Stabex

The ACP chairman then raised the subject which was to dominate the meeting: Stabex. At the full ACP-EEC session he was to describe the Libreville meeting as "the Stabex Council" and call Stabex "the main pillar of the Lomé Convention" (Mme Mayence preferred "one of the pillars of Lomé II"). Stabex was already in financial straits as regards requests for compensation in 1980, only half of which could be met. For 1981, ACP requests total some ECU 422 m, nearly four times what Stabex has available. The ACP countries have also asked for the inclusion of new products under Stabex: tobacco, citrus fruits, sisal products, nutmeg and mace, shea nuts, plywood and wood pulp. Mr Beye invited the EEC Commission "to revise the Stabex mechanism and method of calculation, together with us, and settle the problem once and for all".

As regards the new products, Mr Tindemans announced that the Community accepted the inclusion of nutmeg, mace and shea nuts. Sisal is a knottier problem: Mr Pisani said the Community could decide on this when the outlines of an international agreement between sisal producers and consumers become clear. Tobacco and citrus, like sisal, are long-standing requests, on which the EEC countries are in disagreement. This precluded a decision in Libreville. Plywood and wood pulp, on the other hand, were requested too recently for a decision in May. Commission representatives met Gabonese officials in Libreville and took home enough information on ply-

Also in the yellow pages

The Convention at work

- IV. EDF commitments
- VII. EIB financial decisions
- VIII. ACP embassies
- IX. Zimbabwe: Robert Mugabe in Brussels

General information

- X. The Versailles summit

European Community

- XII. World hunger: proposals of the European Commission
- XIV. Development Council

CID

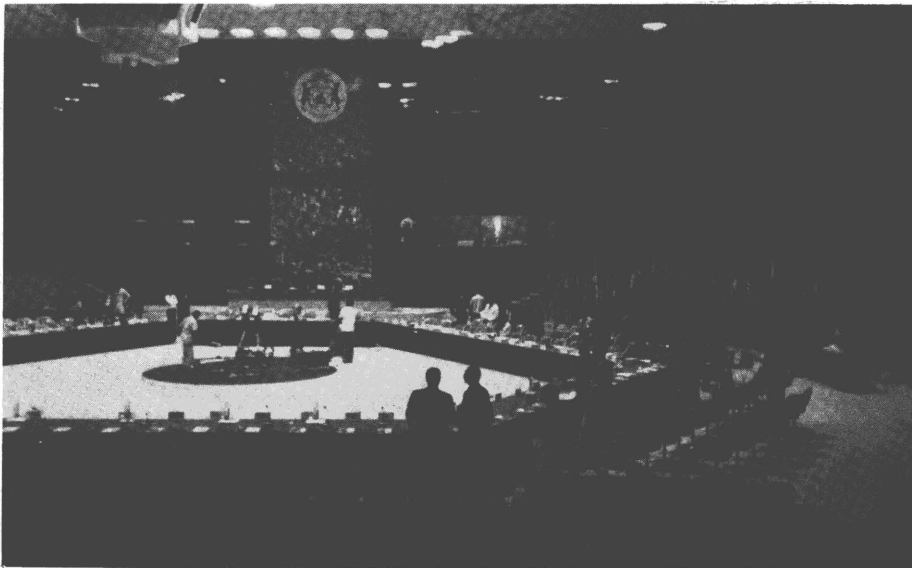
- XV. Industrial possibilities

wood to draw up a proposal on this product for the EEC Council of Ministers. Wood pulp will have to wait, although a decision on it is at all events due before the next ACP-EEC Council.

The Council allowed Stabex coverage for Dominica's coconut and coconut oil exports (from 1 January 1981) to other ACP states. Other countries with individual Stabex queries included Ethiopia, whose claim for Birr 78.9 m has come out on the EEC Commission adding machine as Birr 4.8 m. Such hard luck stories were inevitably overshadowed by the apparent bankruptcy of Stabex as a whole.

The Community's position is broadly that Stabex was never a substitute for international commodity agreements and cannot prop up the markets for such ACP exports as groundnuts, coffee and cocoa, which together represented 95% of the 1981 requests. The ACP position is that, while respecting the spirit as much as the letter of the Convention, fair claims should be fairly settled. The straightforward logic of this drove the EEC delegates into some complex negotiations, from which they emerged with a one-off package which Mr Pisani said was a bottom-line offer. It included:

- ECU 90 m programmed under Stabex this year, plus ECU 22 m as an advance on next year's allocation;
- ECU 30.8 m as a cash top-up;
- ECU 40 m to finance projects that can be "rapidly carried out", and for which the Community will smooth the way, on top of the established EDF programmes (i.e. aid in kind rather than in cash);
- ECU 25.8 m as a subtraction from some ACP countries' claims of amounts they are due to repay to Stabex (non-claiming countries to be exempted).



The Libreville conference centre where the ACP-EEC Council of Ministers met for the seventh time in May

This package adds up to ECU 208.7 m, as against the 1981 ACP claims for ECU 422 m. The extra money is essentially interest accruing on the funds allocated to the EDF and the EIB; with member states joining the EEC at different times and funds carrying over from one Convention to the next, the calculations were difficult enough even without considerations of principles and politics.

The ACP side received the offer with no great enthusiasm. Their chairman confirmed their "attachment to Stabex" and said the EEC should have waited for an ACP response before making what ambassador Sy of Senegal called "a take-it-or-leave-it offer". Mr Beye regretted that priority had not been given to the fundamental problem ("that Stabex is in a state of crisis") and stressed that the unsettled 1980 claims were still on the table. The ACP countries did not accept a link between individual repayments to Stabex and the overall amount of the fund; repayments should be settled after a case-by-case examination and only when the states in question were "in a position" to repay. The amount of the EEC offer was less important than the manner in which it was made and the principles involved, Mr Beye felt.

The EEC side stressed the determined effort they had made and agreed to a case-by-case examination of the repayments. Finally, the ACP-EEC Council referred the Stabex issue to the committee of ambassadors, which will "immediately" start to prepare a comprehensive report on Stabex for a special session of the ACP-EEC Council of Ministers, to be devoted to this question.

Sysmin

Sysmin was debated by the ACP-EEC Council of Ministers for the first

time in Libreville. The ACP ambassadors had suggested that their ministers "ask the Community to speed up the process of examining future ACP requests now that the system's running-in period is over". Zambia and Zaire have made the first Sysmin claims and the Libreville meeting heard that the Commission had approved a special ECU 55 m loan to Zambia, while Zaire's case would go before the EDF Committee in July. Rwanda and Guyana are also possible Sysmin claimants.

Mr Pisani pointed out the importance of mining under Lomé II, a sector involving some 15% of the Convention's resources. The potential multiplier effect of mining enterprises on developing economies should be considered, he said. Allaying ACP fears about a Brazilian request for EEC investment in iron mining, the commissioner said the Community needed better, faster information if it was to help ACP mining.

Sugar

Mr Beye's next point in his address to the ACP Council covered sugar: the allocation of quotas, applications to join the Lomé sugar protocol, prices and the question of sea freight costs. Guyana's trade minister Frank Hope told the ACP-EEC meeting that, since the negotiation of the sugar protocol in 1975-76, Community prices paid to ACP exporters had increased 26% as against 32% for EEC producers, while shipping lines were charging 60% more and refiners 250%. Mme Mayence replied that the protocol had generally worked well, despite difficulties. Mr Pisani feared there would be worse problems in future and called for "useful suggestions".

The meeting noted that Belize and Zimbabwe would join the protocol (39 400 tonnes for Belize, 25 000 t for

Zimbabwe from 1.7.82 plus 6000 t immediately). The Commission was considering a bigger quota for Kenya and waiting to see how the Congo sugar crop will turn out this autumn before making a further decision. Both these countries have failed to deliver previous quotas. Suriname's quota has been re-established and a decision will be made "as soon as possible" on the Ivory Coast, which expects to have an exportable surplus of more than 100 000 t this year. The ACP delegates reiterated their concern over the tiresome and last-minute business of price-fixing. Sea freight costs are not accounted for in the sugar protocol and the Community delegates held to this, despite an ACP appeal to interpret the spirit rather than the letter of the Convention (the spirit includes "obligations as well as benefits", Mr Pisani pronounced).

Trade

The ACP-EEC ministers' traditional concern with trade had a gloomy tone at Libreville. ACP-EEC trade was the cornerstone of Lomé cooperation, but it had failed to live up to hopes, Mr Beye said. Its volume remained "basically insignificant" and the trends were unfavourable to the ACP states, which imported 14% more in value from the Community and exported some 14% less in 1980 (latest figures). The problems seemed to include the extension of preferences to third countries, continuing EEC barriers to some ACP exports and a lack of trade promotion efforts, besides the possibly temporary fall in ACP oil exports to the Community.

In reply, Mr Tindemans agreed that the trade situation called for "deep reflection" and said more information was needed. Too few ACP countries had really taken advantage of their free access to the Community market. Neither the enlargement of the EEC nor the extension of generalized preferences to third countries should disadvantage the ACP states. The ACP-EEC Council referred the general trade situation to the ambassadors for detailed analysis and approved a mandate for a working group on trade.

Particular trade issues were also discussed. One of these was the ACP request for butter mountains and the like (described as "available" Community farm products) to be made available to them on favourable terms. Mr Tindemans reminded the meeting of the Community's work on world hunger and assured delegates that this request was being considered. However, the EEC representatives explained, there is no mechanism for concessionary sales of CAP surpluses to particular beneficiaries; if there were, it might fall foul of GATT. These and other complications are being considered by a sub-

committee, which will be invited to speed up its work (a recurrent theme of the Libreville meeting) and bring suggestions to the next ACP-EEC Council meeting.

Another working group is looking at the effect of the 1983 GSP scheme on ACP exports. It was confirmed that Community initiatives outside Lomé should not reduce advantages already acquired within the Convention. The Council expressed satisfaction with the way ACP-EEC cooperation had allowed a successful presentation of Lomé II to GATT. The ACP group was invited to speak up for itself at GATT meetings, even if the Community "did not wish to put the ACP countries in a delicate position vis-à-vis the Group of 77", as Mr Tindemans said.

Work on the application of a declaration on the rules of origin of fish products will be carried forward to the next ACP-EEC Council. On a final trade point, customs specialists will look into an ACP request for derogations concerning tuna products (Mauritius) and fishing flies (Malawi and Kenya).

Industrial cooperation

In his address to the ACP Council, Mr Beye called for more industrial cooperation; the ACP countries could not "forever be mere suppliers of raw materials" and the Community must restructure its own industries to help ACP industrial development. He attacked "the wave of protectionism which not only tends to close the European market to our industrial products but also to discourage the transfer of finance and technology to our countries". More investment in ACP industry was needed and the rules of origin should be relaxed.

EIB chairman Yves Le Portz outlined the Bank's activities in a round-up of views and reports on this subject, and the ACP-EEC Council called for an examination of the fundamental aspects of industrial cooperation, to be debated at a future meeting. Agro-industry, training and energy were particular points discussed. The ambassadors will report to the next Council session on the study made by a group of experts on annex X of the Convention (additional financing for industrial cooperation).

Agricultural cooperation

In an exchange of views on agricultural cooperation, the Council noted that the ACP states will shortly be putting up a candidate as director of the technical centre for agricultural cooperation, to be set up at Wageningen (Netherlands) with a Brussels office if necessary. Progress on this centre was reported to the meeting, as was progress on a resolution covering ex-post

evaluation of integrated rural development projects.

Evaluation is much more than a technical sideline to the Convention. The Commission is generally keen to ensure local ACP involvement in development projects, e.g. through grass-roots consultation and farm price incentives, while the ACP authorities are equally anxious to maintain their "sovereignty" over projects. The Commission director-general of development, Dieter Frisch, confirmed the recent efforts made in evaluation and said experience showed that the "environment"—the national and regional policy framework—was as important to the success of projects as their intrinsic quality. Commissioner Pisani stressed that a small-scale, localized approach did not mean primitive "barefoot" techniques; microprojects were modern, took account of realities and were more likely to involve ACP firms. Mr Beye said the ACP governments accepted consultations on the possible negative effects, but not on the validity or the necessity, of the projects they submitted.

Noting a "considerable division" of opinion, Mme Mayence felt there should not be insistence on one category of projects rather than another. Lunch, conveniently offered next to the Yugoslav-built conference hall, gave the heads of delegation a chance to discuss this further, and afterwards the debate turned as much on practicalities as on principles. Mr Beye, for instance, pointed to the sheer amount of work involved if great numbers of people were to be consulted about projects, and admitted that farm pricing policies

were a headache to both ACP and EEC governments.

ACP nationals in the Community

The ACP countries' anxiety about their students and other nationals in some EEC countries reached the agenda too late for the Community to prepare a reply, but the issue was aired, notably by Nigeria's economic planning minister, Mrs E. Oyagbola. Some discrimination against legally resident ACP nationals in Europe was "not unknown", she said, giving the example of sudden increases in student fees in the UK, France and Belgium. More than 20 000 Nigerians were studying in the UK alone and it was "against the spirit of the Convention" for them to be required to pay the same fees as students from the oil states, for instance.

"This is a burning issue in our eyes", Mr Beye told the meeting. The EEC delegates took note of these declarations and Mme Mayence said the question would be given full attention, although it was doubtful whether the Convention covered all its aspects (there is no specific mention of students in the joint Lomé declaration on this). The Council asked the co-chairmen of the committee of ambassadors to see how this question should be followed up.

Southern Africa

ACP declarations on southern Africa recalled:

— the resolution adopted in Zim-

The Article 108 Committee

The 22 members of this committee (11 ACP, 10 EEC, 1 Commission) put together a 15-point resolution in Libreville, which was adopted by the ACP-EEC Council and described as "unusual" by co-chairman K.B. Asante of Ghana: its purpose was "not to indulge in splendid futility but to put forward positive improvements", he said. There had been agreement in formulating such contentious issues as farm price policies, local participation in development schemes and the negative effects of large-scale projects, the minister added.

This was more harmonious than might have been expected in view, for instance, of the ACP proposal to improve financial cooperation by doing away with the EDF Committee, and Mr Beye's statement that "the mechanisms inherited from Lomé I are not evolving". In effect, the 108

Committee should give the ACP countries a bigger say in co-managing Lomé development aid. Co-chairman Mme Mayence, while observing that Lomé II had generally allowed the financial and technical cooperation mechanisms to work smoothly, agreed that the political weight of the committee was important; it provided "a new framework for cooperation".

The resolution is wide-ranging and lays down guidelines on various specific matters, besides calling generally for "the reduction of bureaucracy to the minimum" in getting payments through and a "flexible" interpretation of rules of procedure "to speed up the implementation of operations". Its five chapters cover:

- overall orientation;
- application of certain specific provisions of the Convention;
- sectors of intervention;
- principles of intervention;
- implementation of financial and technical cooperation. ○

babwe in February by the ACP-EEC Joint Committee (see *Courier* no. 72);
— the situation in Namibia and the role of the contact group;
— UN resolution 435;
— the ACP states' call for the EEC countries to apply increasing pressure on South Africa in order to end apartheid and clear the way to Namibia's independence.

The EEC unequivocally condemned the principles of the South African government's apartheid policy and recalled the Community's substantial aid commitments to the Southern African Development Coordination Conference (\$675 m under Lomé I and \$800 m under Lomé II, including \$100 m for regional projects).

Other business in Libreville included a report on the work, to be actively pursued, of an ACP-EEC sub-committee on the specific problems of least-developed, landlocked and island developing countries, and reports on the ACP-EEC Consultative Assembly (Luxembourg) and Joint Committee (Strasbourg) meetings last September. The ACP-EEC Council noted the Assembly's resolutions on the fifth annual report of the Council of Ministers, cultural cooperation, world hunger and southern Africa; and the Joint Committee's resolutions on the latter two points, energy cooperation and ACP sugar.

Before considering the ACP-EEC Council agenda, other items discussed by the ACP Council of Ministers in Libreville included reports on their previous meeting (Maseru), presented by ambassador L.D. Monyaké, and on the activities of the ACP committee of ambassadors, presented by its chairman, Oliver Jackman. There was a discussion on sanctioning ACP states that have failed to pay their dues to the ACP group; although only two countries out of the 63 were reported in arrears, this may continue to be an internal problem.

* * *

Although many delegates probably felt it was not too early to think about what happens after Lomé II, the Libreville meeting kept to today's practicalities rather than tomorrow's possibilities. Welcoming the delegates on behalf of President Bongo, Gabon's deputy PM Georges Rawiri transmitted the President's opinion that the meeting was particularly important because it took place halfway through Lomé II and at "a crucial moment in our cooperation". Yet it was not all horse-trading. Mr Beye referred to "the post-Lomé II perspective" and considered that the real value of the Convention was "in its capacity of improvement". The discussion on evaluation opened the door to the wider question of how development projects can be made to stick

better in the ACP countries, and the first ministerial meeting on financial and technical cooperation could also be seen as raising the delegates' sights beyond the letter of the present Convention.

Mr Pisani, in his opening address to the ACP-ECC Council of Ministers, took a wide view of Africa's great development problems and contrasted it with the tendency to get bogged down in statistics and statements. The Community would never take over Africa's responsibilities, but the "solidarity and common destiny" of the ACP and EEC countries must be seen as underlying their future cooperation, he said.

The next meeting of the ACP-EEC Council of Ministers will be held in Europe; the date and place are still to be decided. ○

BARNEY TRENCH

EDF

Following favourable opinions by the EDF Committee at its 167th and 168th meetings the Commission of the European Communities adopted financing decisions concerning the following countries.

Mauritania

Development of stock-farming in South-East Mauritania

Fourth EDF
Grant: ECU 1 643 000
Fifth EDF
Grant: ECU 2 300 000

The aim of the project is to increase livestock production in South-East Mauritania, by:

- increasing animal health protection;
- improving the feed situation in a manner compatible with the regional environment and economy;
- introducing measures in favour of small stock.

The project is intended to reach a large section of traditional stock-farmers.

Uganda

Animal disease control project

Fourth EDF
Grant: ECU 7 300 000

The lack of means available to the veterinary department of the Ministry of Animal Industry in Uganda has caused a rise in livestock mortality as various contagious animal diseases, i.e. tick-borne diseases and those caused by the tsetse fly, have become increasingly prevalent. The project will help to provide means of transport, veterinary equipment, building materials,

drugs, vaccines and technical assistance.

Uganda will then be able to deal effectively with its various animal diseases and livestock mortality should consequently decrease to the benefit of both the individual farmer and the country as a whole.

Benin

Drinking water supply for the rural population in Atacora, Mono and Ouémé

Fifth EDF
Grant: ECU 4 500 000

The purpose of this project is to give part of the rural population of the provinces of Atacora, Mono and Ouémé a sufficient and regular supply of drinking water through the construction of 305 boreholes fitted with hand-operated pumps and the renovation of 73 existing wells.

Maintenance is to be organized on lines adapted to local conditions and based on involvement of the population in all the financial and technical aspects.

Tanzania

Mwanza water supply

Fifth EDF
Grant: ECU 11 000 000

The project is designed to meet the increasing needs of the population of Mwanza, which is the major urban centre in north Tanzania and the second largest population centre in the country (150 000 inhabitants in 1978). It will involve the construction of a new water intake, the installation of new pumping equipment and a treatment plant, as well as the laying of new distribution mains. A better water supply, in terms of both quantity and quality, will improve the health situation, enhance the living standards of the Mwanza population and allow further development of socio-economic activities.

Senegal

Gum plantation

Fifth EDF
Grant: ECU 2 400 000

The project involves the planting of 2 500 hectares of gums in village plots in the department of Podor (river region). It will cover the infrastructure and equipment required for the establishment of the plantations. Production is expected to start after four years and will increase gradually to reach 250 t per annum.

The project will involve approximately 1 000 families.

Sierra Leone

Poturu rubber project

Fifth EDF

Loan on special terms:
ECU 2 400 000

The project (estimated cost: ECU 32.96 million) will be cofinanced by the Commonwealth Development Corporation (United Kingdom), the Caisse Centrale de Coopération Economique (France) and the EDF.

Its purpose is:

- the rehabilitation and bringing into tapping of 1400 ha of existing rubber, including 325 ha of privately owned trees;
- the planting of 2305 ha of new rubber, of which 1010 ha on a nucleus estate at Poturu and 1295 ha by 400 outgrowers around Poturu;
- the construction of facilities to process all the latex produced.

Once in full production, the project will produce about 3 500 tonnes of dry rubber per annum and provide a substantial number of jobs.

Guinea-Bissau

Development of traditional fishing in Cacheu

Fourth EDF

Grant: ECU 270 000

Fifth EDF:

Grant: ECU 1 230 000

Loan on special terms ECU 470 000

ECU 1 970 000

The project is designed to:

- increase the quantities of fish caught for the home market;
- improve the income of the local fishermen and create new jobs;
- develop the fishery products distribution network.

The project involves implementation of a programme to equip canoes with engines and increase the number of boats, improve traditional fishing methods, supply fishing gear and improve storage and marketing facilities.

Guinea-Bissau

Construction of hospitals and health centres and supply of equipment

Fifth EDF

Grant: ECU 1 900 000

The aim of this project is to expand and improve Guinea-Bissau's health infrastructure by building two district hospitals at Quebo and Cosse and four health centres at Xitole, Bambadinca, Ponta-Ingles and Banta, in the south and east of the country.

The project is designed to achieve two of the government's basic objectives:

- to improve health facilities (both preventive and curative) in rural areas which have hitherto been very poorly served;

— to improve as a result the quality of treatment in the existing regional and national hospitals, which are currently overburdened with cases of minor illness.

Papua New Guinea

Multiannual training programme (1982-85)

Fifth EDF

Grant: ECU 3 200 000

The programme includes both on-the-spot and overseas training schemes and provides for the creation of academic links between tertiary-level institutions in Papua New Guinea and similar education establishment in Europe. It will also enable foreign nationals working in a supervisory and management capacity in the public sector to be replaced by citizens of Papua New Guinea.

Rwanda

Multiannual training programme 1981-85

Fifth EDF

Grant: ECU 1 800 000

The multiannual training programme consists of a number of aspects, which may be subdivided into long-term study awards and training courses of varying length.

The awards are mainly for students at the Université Nationale du Rwanda, a considerable number of whom will become secondary teachers (approximately 40%). It should be pointed out that, of the 1856 study and training awards planned, 1 783 (96%) are for courses in Rwanda.

Cape Verde

Multiannual training programme 1981-85

Fifth EDF

Grant: ECU 550 000

The programme covers:

- the provision of study and training grants for on-the-spot training of teachers;
- the supply of teaching equipment for educational establishments.

The grants programme is designed to permit on-the-spot training of around 190 primary and secondary school teachers and the retraining of 80 existing teachers.

Sudan

Sudan trade promotion

Fourth EDF

Grant: ECU 340 000

The project aims at strengthening the major institutions involved in export development and export promotion in Sudan. This is to be achieved by:

- strengthening the export promotion department of the Ministry of Cooperation, Commerce and Supply with a trade promotion adviser;
- providing training;
- supporting Sudan's participation in international trade fairs.

Tanzania

Coffee development programme

Fifth EDF

Grant: ECU 13 500 000

The aim of the project is to improve the methods of cultivation and the average yield of coffee so as to increase the country's potential foreign currency earnings and planters' income. The project will involve civil works (housing, stores and pulperies), the supply of transport, materials and equipment and also technical assistance.

Papua New Guinea

Fisheries resource assessment vessels

Fourth EDF

Grant: ECU 1 124 000

This project involves supplementary financing for the purchase of two multi-purpose fisheries resource assessment vessels, one of medium size capable of operating on the high seas and a smaller one intended for inshore fishing. Since the 1960s, Papua New Guinea has substantially increased its exports of fishery products and its potential resources are very considerable.

ACP Pacific states

Forum Fisheries Agency headquarters

Fourth EDF

Grant: ECU 300 000

Fifth EDF

Grant: ECU 350 000

The aim of the project is to construct permanent headquarters for the South Pacific Forum Fisheries Agency. This agency, set up in 1979, currently has a membership of 12 island and coastal Pacific states. Its role is to coordinate fisheries management policies and ensure maximum utilization of the marine resources of the region.

Grenada

Reconstruction of Hillsborough jetty.

Fifth EDF

Grant: ECU 322 000

The purpose of the project is to improve transport communications with the island of Carriacou by constructing a jetty at Hillsborough to replace the only existing jetty on the island which has been out of use for the last five years. The new jetty will be able to accommodate cargo vessels of up to 500 tonnes.

British Virgin Islands

East End water supply project

Fifth EDF

Loan on special terms:
ECU 500 000

Under the development plan for water resources and supply for the British Virgin Islands, this project caters for the needs of the East End population living in Tortola's second largest urban area after the capital Road Town. The project involves the construction of four wells, a 900 m³ reservoir and distribution pipework throughout this densely populated area.

Somalia

Somalia trade promotion

Fifth EDF

Grant: ECU 670 000

The project involves strengthening the country's institutional structures in the field of trade promotion through training and assistance with participation in trade fairs. Trade promotion will be directed towards two export sectors in particular: frankincense, where the prospects are very promising, and the livestock sector which, although revealing signs of weakness, remains the backbone of the country's exports.

Swaziland

Science pre-entry courses and the science teacher upgrading programme at UOS

Fifth EDF

Grant: ECU 703 000

The object is to assist the close co-operation between the Free University of Amsterdam and the University of Swaziland in upgrading science education. This cooperation will focus upon:

- continuing the existing science pre-entry courses at UOS, mainly by providing scholarships for some 120 students each year;
- continuing the science teacher upgrading programme by providing technical assistance.

Senegal

Multiannual training programme (1981-1983)

Fifth EDF

Grant: ECU 1 500 000

The purpose of the programme is to finance two years of training covering the academic years 1981/82 and 1982/83. It is designed to cover the cost of study and training awards, vocational training and the organization of seminars or retraining courses, particularly in the technical and agricultural sectors.

Zambia

Rural townships' water supply

Fifth EDF

Grant: ECU 5 200 000

The third national development plan gives high priority to the expansion and rehabilitation of the country's rural townships' water supply. The project will rehabilitate and expand the piped water supply systems of Katete and Nyimba (Eastern Province), Mumbwa (Central Province) and Gwembe and Zimba (Southern Province).

Senegal

Renovation of the St Louis Hospital and the Tambacounda health centre

Fifth EDF

Grant: ECU 2 825 000

The project, which aims to complete the second phase of the renovation of the St Louis Hospital, involves the construction of new buildings and the restoration of existing buildings. It also involves modernizing the Tambacounda Health Centre (Eastern Senegal) and the supply of equipment.

Guinea-Bissau

Rural development of the Bafata Gabu region

Fifth EDF

Grant: ECU 6 800 000

The aim of this project is the continuation of schemes carried out earlier as part of the rural development of the Gabu Bafata region—schemes which were based essentially on growing cotton and groundnuts.

This new project is aimed at developing food crops in close association with industrial-scale crops. To achieve this, the necessary rural infrastructure will be built, extension services will be provided for growers and equipment and inputs will be supplied. The project will involve some 25 000 families, averaging 10 persons per family. o

ACP-EEC JOINT COMMITTEE

Meeting of ACP-EEC economic and social interest groups

The sixth meeting of the ACP-EEC social interest groups took place in Geneva in June during the annual month-long session of the International Labour Conference. The meeting was convened by the Joint Committee of the Consultative Assembly of the Lomé Convention and as well as a Joint Committee delegation of 12 ACP countries and 12 MEPs there were 21 mem-

bers of the European Community's Economic and Social Committee (drawn from the three groups; employers, workers and others interests) led by ESC President Thomas Roseingrave as well as some 20 ACP employers and trade unionists who have been attending the International Labour Conference. As the meeting was organized by the Joint Committee the two co-chairmen, Giovanni Bersani (It. EPP) and Francis Butagira (Speaker of the Uganda National Assembly) presided.

The meeting took the form of preliminary joint interest group meetings of employers and trade unionists followed by a full plenary session. The two major topics on the agenda were: "the role of rural development in the economic progress of ACP countries" and "ACP migrant workers in the EEC". The ESC produced a working document on each subject, as did the ACP, the first on rural development from Mr D. Williams, a British representative from the ESC and the second on the problems of migrant workers drafted by Mr Soulat, a French trade unionist.

During the debate on rural development certain European parliamentarians laid stress on the key issue of pricing policies. As the document pointed out the whole question was one fraught with difficulties, for agricultural prices lay at the very heart of general economic policy for African governments. The feeling on the European side was that progress would only take place when the purchasing power of those producing the crops was increased.

The ACP paper on the subject laid stress on the importance of setting up technical centres for agricultural and rural co-operation as soon as possible, "to serve as a focus for schemes of integrated rural development".

Migrant workers

Introducing his paper on migrant workers, Mr Soulat stated that it was "imperative to protect the cultural backgrounds of migrant workers". The importance of the declaration adopted by the Joint Committee on 31 January 1979 (and later incorporated into Lomé II as Annex XV) was stressed by both sides in the debate that followed.

According to this declaration the member states of the EEC shall accord to ACP workers treatment free from any discrimination as regards working conditions, pay and social security benefits linked to employment. The same would apply to EEC nationals working in an ACP state. For the Commission, the deputy director-general for development, Maurice Foley gave an impassioned call for an end to racism in Europe. The ACP representatives expressed the hope that efforts

would be made during the course of the negotiations for Lomé III to incorporate provisions going beyond the limited scope of the existing joint declaration.

The debate ended with the chairmen calling for further work on these two subjects leading up finally to a debate and a possible drafting of resolutions for the ACP-EEC Consultative Assembly annual meeting. ○

BELIZE

Indicative programme

Belize joined the ACP group on 5 March 1982 and on 24-28 May a Commission delegation went out, on the Community's behalf, to programme the resources being provided for this country by the 5th EDF. This mission, the first official visit from the Community since independence, ended with the signing of an indicative programme by PM George Price and the Commission representative. ○

ABEDIA

Maurice Foley visits the Arab Bank for Economic Development in Africa

Maurice Foley, deputy head of DG VIII, went out to Khartoum (Sudan), where ABEDIA has its headquarters, on 19 April to 1 May this year at the Bank's invitation to attend the annual meeting of the Board of Governors and outline Community development policy. This was the first time ABEDIA had asked the Commission to attend and speak at one of these meetings.

Discussions with Arab funds

The visit to Khartoum was also an opportunity to have a detailed exchange of views with the president of the bank on the possibility of closer cooperation, to meet representatives from a large number of financial organizations (Arab funds, OPEC funds, the ADB and the World Bank) who were also attending and to look at the country's problems with the ambassadors of the member countries and the delegations. Mr Foley was also able to talk with President Nimeiri of Sudan.

This mission is part of the Community campaign for closer, more structured contact with the main financial organizations of OPEC and the Arab world. ○

EIB

EIB finances two palm oil ventures in Cameroon.

The European Investment Bank, the European Community's bank for long-term finance, has granted two loans under the second Lomé Convention for a total equivalent to ECU 10.7 million (about CFA francs 3.3 billion) to finance the construction, enlargement or improvement of four edible oil mills in Cameroon.

Construction and modernization of Mondoni and Idenau oil mills

The equivalent of CFA F 2.15 billion goes to the state for 15 years at 8%, after an interest subsidy charged to the EDF. The proceeds will be on-lent to the Cameroon Development Corporation (Camdev), a public agency chiefly engaged in production of palm oil, tea, rubber and bananas.

Camdev is currently embarking on a major investment programme for the period 1981 to 1987, which involves the rehabilitation or planting of 9 000 hectares of rubber estates, 1 200 ha. of oil palms and various other additional or replacement plantings.

In conjunction with these estate schemes, Camdev plans to build a mill to process 20 tonnes of palm fruit per hour at Idenau near Victoria. This will replace existing 9 t.p.h. plant, now much too small and unsuitable for rebuilding and enlargement.

In addition, various improvements are planned for another Camdev oil mill, at Mondoni near Douala, which will be uprated from 32 to 40 t.p.h. with productivity enhanced by means of various operational and technical improvements.

These parts of the investment programme are due for completion by 1984, at an estimated overall cost of around CFA F 3.5 billion. Finance for the works is also being provided by the Caisse Centrale de Coopération Economique (Paris), while funds for the 1981/87 programme in general are being put up by the World Bank and the Commonwealth Development Corporation.

Extension of Dibombari oil mill

A loan for the equivalent of CFA F 1.15 billion goes to Société Camerounaise de Palmeraies (Socapalm), also for 15 years at 8% after the interest subsidy, to part-finance uprating of the Dibombari oil mill near Douala.

The works include a new production line to process 20 t.p.h. of fresh palm fruit, complete with presses, oil clarification installations and equipment to process also palm kernels. The facilities

should be operational by March 84, to enable all production from the existing Dibombari palm plantation to be processed locally.

The aim is to increase production at the plantations in question from its present level of 44 500 tonnes per annum to around 78 000 t.p.a. of palm fruit by 1988, with commercial estates and the smallholders' groves alike reaching full bearing in the interim. The uprating of the oil mill, for which a first ECU 2.4 million loan was granted in 1976, is designed to provide optimal processing capacity for the expanded output from the plantations.

Construction of a fertilizer complex in Senegal

The European Investment Bank, has also announced a loan for the equivalent of more than CFA F 3.4 billion (ECU 11 million) to assist with constructing an industrial complex in the Republic of Senegal. The plant comprises sulphuric and phosphoric acid production facilities near the head of the Taïba phosphate mine, 50 km from Dakar, and installations for manufacturing fertilizers in the Dakar free zone. The funds have been advanced for 15 years at 8%, after deducting an interest subsidy financed from the European Development Fund.

The complex, to be operated by Industries Chimiques du Sénégal (ICS) and scheduled for commissioning in early 1984, includes equipment for producing more than 560 000 tonnes of sulphuric acid, 220 000 tonnes of phosphoric acid and 240 000 tonnes of fertilizer a year, a thermal power station with a 13 MW turbo-alternator set, storage and handling facilities and ancillary installations. The works are costed at CFA F 56 billion and represent the largest industrial project ever implemented in Senegal.

50% of production will be marketed in the form of phosphoric acid and the balance as solid fertilizers. The venture will enable use to be made of sludge, a by-product of phosphate mining, which hitherto had been wasted.

ICS's main shareholders are the Senegalese state, followed by the Ivory Coast, Cameroon, Nigeria, the Islamic Development Bank and other companies which will provide technical assistance in implementing the project or already operate the phosphate mine. ICS, established in 1976 following a feasibility study, conducted an additional study before being entrusted with the task of carrying through the works.

The World Bank and the International Finance Corporation, the African Development Bank, the Arab Bank for Economic Development in Africa, Caisse Centrale de Coopération Eco-

nomique (France) and the OPEC Special Fund are co-financing the venture.

The EIB has already provided support for this project, having advanced a conditional loan for ECU 200 000 in 1978 for conducting feasibility studies, along with three loans totalling ECU 17.7 million (some CFAF 5.3 billion) in 1980 and 1981 for financing the initial phases of the works and to assist the state in funding its equity participation in the company. ○

OTHER AID

Urgent aid for Madagascar

The Commission has decided to grant aid of ECU 1 000 000 to Madagascar.

Three cyclones in January caused severe damage and the Community together with the member states provided aid totalling ECU 215 000 for the island, but this proved to be insufficient to cover all needs.

A further cyclone in March killed 93 people, left 118 000 homeless and destroyed 112 000 tonnes of rice.

As a result of the worsening situation, there is now an urgent need for substantial quantities of food, medicines and basic materials to repair the damaged houses.

Of this aid ECU 100 000 will be allocated to the World Council of Churches which has set up a ECU 400 000 programme to provide immediate supplies of food and medicines.

Emergency food aid

Niger: 5000 tonnes of cereals — ECU 1m.

The aid is for those sections of the population who have been affected by drought.

Botswana: — 500 tonnes of milk powder ECU 623 000.

After the severe drought in 1981-82 the Botswana government requested aid for the centre and north-east of the country, especially for the school food programme affecting 185 000 children. The Commission has therefore agreed 500 tonnes of milk powder for this programme. ○

ACP AMBASSADORS

Comoros

Mr Ali Mlahaili, a 38-year old father of two, is Comoros' new ambassador to the EEC. He qualified at the regional



EEC photo

Ambassador Ali Mlahaili of the Comoro Islands meeting Commission President Gaston Thorn

institute of public administration in Lyon and taught for a short while in 1966 and 1967 before being elected to the Comoran chamber of deputies, where he stayed until 1971. In 1974, he was appointed head of cabinet to the President, Ahmed Addallah, and in 1975 and 1976 he was secretary-general at the ministry of the interior and then director-general of Radio-Comoros and secretary-general to the national assembly. A period as delegate at the ministry of foreign affairs and co-operation followed, from October 1978 to August 1980, and Mr Mlahaili was then accredited to France as Comoros' ambassador.

Upper Volta

Lieutenant-colonel Antoine Dakoué has just replaced Pierre Ilboudo as Up-



EEC photo

Ambassador Antoine Dakouré presenting his credentials to the President of the Commission

per Volta's ambassador to the Community. The 46-year old officer, who is married with three children, trained in France, first at the Fréjus school for officers and then at the school of engineering in Angers. In 1964, he was posted to army headquarters and from March 1965 to January 1966 he headed the military cabinet of the President of the Republic. He then entered the government as secretary of state for information, youth and sport, was minister for agriculture in 1967-1974 and director of the department of planning and rural development in 1974-1976 before being appointed adviser to the President. Since 1977, Lieutenant-colonel Dakouré has been a member of the Brandt Commission. ○

AD HOC COMMITTEE MEETS

The ad hoc committee of ACP trade operators which was set up a year ago in Lomé by the first conference of ACP businessmen met in Brussels on 2-3 June.

Composed of two representatives from each of the ACP regions (Togo and Nigeria for West Africa, Cameroon and Gabon for Central Africa, Kenya and Mauritius for Eastern Africa, Zimbabwe and Lesotho for Southern Africa, Jamaica and Barbados for the Caribbean and Papua New Guinea and Fiji for the Pacific), the Committee is examining the modalities for the establishment of an ACP chamber of commerce and preparing another full conference of ACP trade operators for 1983. The ambiance of the meeting was markedly different from the noisy atmosphere of the one that took place in Lomé. It was orderly, serious and forward-looking — a clear indication that the idea of an ACP chamber of commerce is evolving into reality, much more rapidly than most optimistic forecasts would have anticipated.

Indeed, opening the two-day meeting, the chairman Mr Koffi Djondo, president of the Togolese chamber of commerce, industry and agriculture gave what amounted to a very encouraging progress report since the Lomé conference. He revealed that serious steps were being taken to implement the most important recommendation of that conference, namely, the need for various regions in the ACP group to establish federations of chambers of commerce as a pre-requisite for the formation of an ACP chamber of commerce. Such a federation already exists in West Africa. Mr Djondo announced that a federation was being established in East Africa, one was set up in May in Central Africa, and that businessmen in Southern Africa were contacting each other with a view to forming one. As



From left to right, *Thomas Okelo-Odongo, secretary-general of the ACP group; Oliver Jackman, chairman of the ACP committee of ambassadors; G. Koffi Djondo, chairman of the ad hoc committee of chambers of commerce; F.N. Macharia, the ad hoc committee's rapporteur, and Mauritian ambassador Raymond Chasle*

for the Caribbean and Pacific, he said, existing business associations were being reorganized to respond to the Lomé recommendation.

The Committee went on to tackle one of the issues much raised at the Lomé conference: the question of information and communication, an issue that was provoked by the distribution of a booklet purporting to list technical institutions in the ACP states and which the Committee found to be hollow and useless. It went on as a result to elaborate its own questionnaire to be sent to all business organizations in the ACP states. Replies to the questionnaire will allow the intra-ACP cooperation unit in the ACP Secretariat to



Congolese ambassador Alfred Raoul (centre) with Mr Mebalé, chairman of the Gabon chamber of commerce on the right

compile an informative directory of business in the ACP states. This unit has been put at the disposal of the trade operators who wanted an expert to be recruited to deal exclusively with the matter within the Secretariat. The intra-ACP cooperation unit will be expected to gather and disseminate information from time to time about trade opportunities within the ACP states to the various chambers of commerce. The committee regretted that the Lomé recommendations were not put to the Council of Ministers as requested and hoped that this would be done in view of the fact that the political framework within which ACP trade operators are expected to work in such areas as custom barriers and tariffs, has to be established.

As for future conferences, the ad hoc committee tried to distinguish between the desire for a federation of ACP chambers of commerce and the realities of the various meetings that would have to take place before it comes into existence. To this end it has instituted what will be known as the conference of ACP chambers of commerce, industry and economic operators. The first of these meetings, it agreed, should take place in Jamaica on 6-10 June 1983, but before then the ad hoc committee felt it should meet and fixed a rendez-vous in Fiji on 8-9 February 1983. It agreed an agenda for the full conference in Jamaica but this will be re-examined in Fiji.

o A.O.

Accompanied by ministers Bernard Chidzero (finance and planning), Witness Mangwende (foreign affairs), Dennis Norman (agriculture), Simbi Makmi (industry and energy) and Frederick Shava (manpower development) and several senior officials including EEC ambassador Arthur Blumeris, Mr Mugabe also attended a special session of the EEC Commission chaired by Mr Thorn.

At this session Mr Thorn, referring to Mr Mugabe's last visit in 1979 (during the Lancaster House negotiations leading to Zimbabwe's independence) underlined the pragmatic approach Africa's youngest nation has adopted during its first two years of independence: This cannot be stressed enough as "Zimbabwe's success will have far-reaching consequences for the whole of southern Africa", Mr Thorn declared. Outlining Zimbabwe's priorities for agricultural and resettlement schemes in the rural areas, he recalled the EEC's efforts to respond to these basic needs: during the 1980-81 period, preceding the ratification of the Lomé II accession agreement, Zimbabwe was allocated a total of ECU 31.75m in various forms.

As a result of Zimbabwe's accession to Lomé II, ECU 85m was added to the fifth EDF for the 1982-85 period. Apart from the usual trade access to the EEC market, Zimbabwe also can sell, under the special protocols, 25 000 tonnes of sugar and 8 100 tonnes of beef at EEC prices.

Mr Thorn also stressed the importance of regional cooperation within southern Africa, and referred to SADCC, where Zimbabwe is responsible for agricultural development and food security matters.

In his reply, Premier Mugabe pointed out that "on the economic and technical cooperation side, the picture is generally very bright and potentially very fruitful on virtually all accounts", but he regretted that on the trade side the picture was somewhat less bright, particularly since his country had not yet been able to take advantage of its beef and sugar quotas. Referring to the next convention, he stressed the severe balance of payments problems of the developing countries and expressed his concern over growing EEC protectionism towards certain ACP exports. He said that the ACP countries should be kept informed on future EEC enlargement and its possible consequences for ACP trade and called for close examination of the operation of both Stabex and Sysmin in view of ACP needs.

He expressed his confidence that "with vision and tenacity of purpose" the EEC-ACP relationship could be rendered "fully compatible with even more global forms of cooperation, embracing other countries, to the benefit

ZIMBABWE:

Robert Mugabe at the Commission

Zimbabwean Prime Minister Robert Mugabe visited the EEC Commission and held discussions with Commission President Gaston Thorn and development commissioner Edgard Pisani, on 27 May.

The visit was part of a tour of seven European nations which started on 18

May and involved the United Kingdom, France, the Federal Republic of Germany, Belgium, the Netherlands, Italy and Greece. The tour allowed Zimbabwe, independent since 18 April 1980, to consolidate political and economic relations with the European Community and EEC member states.

socialism can develop Zimbabwe in a way few observers believed before 18 April 1980. o R.B.D.



EEC photo

Prime Minister Robert Mugabe

of mankind as a whole". Replying, commissioner Pisani expressed his concern over the low level of ACP-EEC trade, and underlined the difficulties facing Zimbabwe's agrarian reform and resettlement programme. He brought into evidence the EEC's new approach to food-aid and strategies where, in the case of Zimbabwe, the EEC will secure the country's requirements for the next five years in milk products, thus allowing it to develop its own milk sector to match a soaring demand. He also touched on southern Africa's key problem: the continuous political, social and economic tension in the region created by South Africa's policies. Zimbabwe clearly has a show case function in his view: "the peace and security of this whole region" will be affected by the success of the Zimbabwean policy.

In the course of the session, finance and planning minister Bernard Chidzero sketched out Zimbabwe's major resettlement task. Within the next three years, 162 000 families will be resettled. "This should not be seen just as a simple exercise of transferring lands and assets with — as it is often misconceived — possibly negative effects on the country's agricultural and export capacity, but as a basic, albeit ambitious, integrated rural development programme". He gave an assurance about Zimbabwe's absorptive capacity for aid: the March 1981 Zimcord conference pledged some Z\$1300 million, of which some Z\$ 450m have so far been committed to concrete projects. An assessment will be released soon.

In view of Zimbabwe's needs for investment in infrastructure, in particular in the transport and social sectors, Mr Chidzero also called for understanding of the country's rapidly growing capital and recurrent expenditure. "We have

to run faster than others", he said.

During the session, EEC vice-president Davignon and minister Makmi, both handling energy portfolios, agreed on future contacts to examine ways and means of cooperating in planning energy requirements and developing new and renewable sources of energy.

At a well-attended press conference at the end of the visit, Mr Mugabe called upon private investors to come to Zimbabwe. He dismissed the possibility of concluding new bilateral, investment agreements; newcomers would get the same favourable treatment as the many private investors, already established. After all, due to the Lancaster agreement, Zimbabwe has "the firmest constitution in the world".

Mr. Mugabe's tour has generally been viewed as a successful exercise in convincing the EEC and its member states that this pragmatic approach to

ZIMBABWE: rural development technology fair

Rural development is a priority in southern Africa as in most of the developing world. To promote it, a special trade fair will be held in Bulawayo from 15-19 September 1982.

The Rural Development Technology 82 Exhibition — RDT 82 for short — will bring together specialists in Third World farming technology from all over the world. Organized by Zimbabwe International Industrial Exhibitions (Pvt) Ltd, with the help of the biggest independent exhibition organizers in the world, the Andry Montgommery Group, the exhibition will be of particular interest to the eight other SADCC countries.

President Canaan Banana of Zimbabwe has warmly welcomed this opportunity of seeing "the appropriate technology available on the world market designed to improve the quality of life in rural areas". Seminars on rural development are planned for each day of the show, with the attention focussed on particular SADCC countries as well as on rural development topics of general interest.

Financial assistance from the EEC is available to ACP countries wishing to participate, and a number of international agencies should be represented. Exhibition space is offered at US\$ 100 per square metre indoors and \$850 outdoors. Enquiries to "RDT 82" at P.O. Box 4259, Harare, Zimbabwe; or 11, Manchester Square, London W1M 5A8 (tel. 01-486 1951). o

GENERAL INFORMATION

The Versailles summit

After their meeting in Versailles the heads of government of the seven richest members of the OECO made the following declaration outlining a number of objectives to improve the world economic situation:

"We affirm that the improvement of the present situation, by a further reduction of inflation and by a return to steady growth and higher levels of employment, will strengthen our joint capacity to safeguard our security to maintain confidence in the democratic

values that we share, and to preserve the cultural heritage of our peoples in all their diversity. Full employment, price stability and balanced growth are ambitious objectives. They are attainable in the coming years only if we pursue policies which encourage produc-

tive investment and technological progress. If, in addition to our own individual efforts, we are willing to join forces, if each country is sensitive to the effects of its policies on others and if we collaborate in promoting world development.

"In this spirit we have decided to implement the following lines of action:

"Growth and employment must be increased. This will be attained on a durable basis only if we are successful in our continuing fight against inflation. That will also help to bring down interest rates, which are now unacceptably high, and to bring about more stable exchange rates. In order to achieve this essential reduction of real monetary policies and achieve greater control of budgetary deficits it is essential to intensify our economic and monetary cooperation. In this regard we will work towards a constructive and orderly evolution of the international monetary system by a closer cooperation among the authorities representing the currencies of North America, Japan and of the European Community in pursuing medium-term economic and monetary objectives. In this respect we have committed ourselves to the undertakings contained in the attached statement (see below).

"The growth of world trade in all its facets is both a necessary element for the growth of each country and a consequence of that growth. We reaffirm our commitment to strengthening the open multilateral trading system as embodied in the GATT and to maintaining its effective operation. In order to promote stability and employment through trade and growth, we will resist pro-

tectionist pressures and trade-distorting practices. We are resolved to complete the work of the Tokyo round and to improve the capacity of the GATT to solve current and future trade problems. We will cooperate with the developing countries to strengthen and improve the multilateral system and to expand trading opportunities in particular with the newly industrialized countries. We shall participate fully in the forthcoming GATT ministerial conference in order to take concrete steps towards these ends. We shall work for early agreement on the renewal of the OECD export credit consensus.

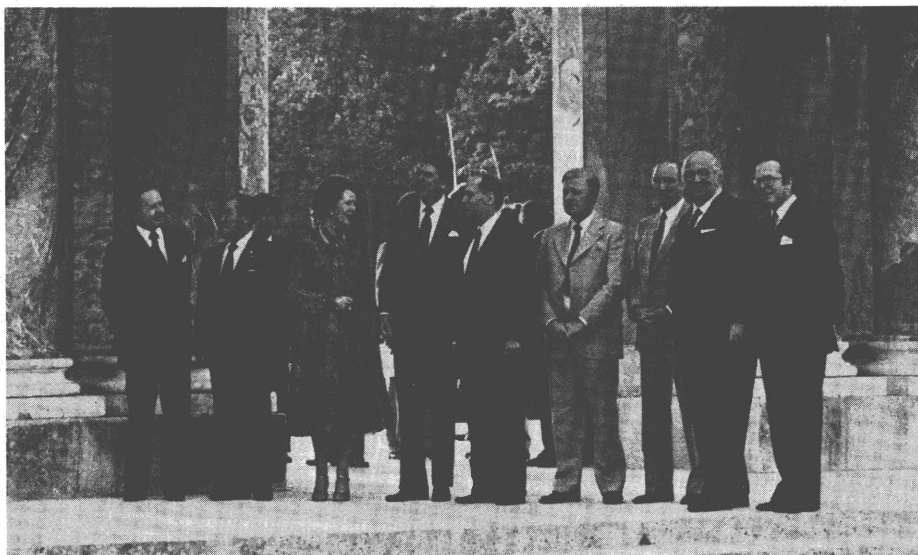
"We agree to pursue a prudent and diversified economic approach to the USSR and Eastern Europe, consistent with our political and security interests. This includes actions in three key areas. First following international discussions in January our representatives will work together to improve the international system for controlling exports of strategic goods to these countries and national arrangements for the enforcement of security controls. Second we will exchange information in the OECD on all aspects of our economic, commercial and financial relations with the Soviet Union and Eastern Europe. Third, taking into account existing economic and financial considerations we have agreed to handle cautiously financial relations with the USSR and other eastern European countries, in such a way as to ensure that they are conducted on a sound economic basis, including also the need for commercial prudence in limiting export credits. The development of economic and financial relations will be subject to periodic ex-post review.

"The progress we have already made does not diminish the need for continuing efforts to economise on energy, particularly through the price mechanism, and to promote alternative sources including nuclear energy and coal. In a long-term perspective, these efforts will enable us further to reduce our vulnerability to interruptions in the supply of energy and instability of prices. Cooperation to develop new energy technologies and to strengthen our capacity to deal with disruptions can contribute to our common energy security. We shall also work to strengthen our cooperation with both oil-exporting and oil-importing developing countries.

"The growth of the developing countries and the deepening of a constructive relationship with them are vital for the political and economic well-being of the whole world. It is therefore important that a high level of financial flows and official assistance should be maintained and that their amount and their effectiveness should be increased as far as possible with responsibilities shared broadly among all countries capable of making a contribution. The launching of global negotiations is a major political objective approved by all participants in the summit. The latest draft resolution circulated by the group of 77 is helpful and the discussion at Versailles showed general acceptance of the view that it would serve as a basis for consultations with the countries concerned. We believe that there is now a good prospect for the early launching and success of the global negotiations, provided that the independence of the specialized agencies is guaranteed. At the same time we are prepared to continue and develop practical cooperation with the developing countries through innovations within the World Bank, through progress in countering instability of commodity export earnings.

Through the encouragement of private capital flows, including international arrangements to improve the conditions for private investment, and through a further concentration of official assistance on the poorer countries. This is why we see a need for special temporary arrangements to overcome funding problems for IDA VI and for an early start to consideration of IDA VII. We will give special encouragement to programmes or arrangements designed to increase food and energy production in developing countries which have to import these essentials, and to programmes to address the implications of population growth.

"In the field of balance of payments support, we look forward to progress at the September IMF annual meeting towards settling the increase in the size of the fund appropriate to the coming eight quota review.



The Versailles summit. From left to right Gaston Thorn, President of the EEC Commission, Prime Minister Zenko Suzuki of Japan, Prime Minister Margaret Thatcher of the United Kingdom, President Ronald Reagan of the USA, President François Mitterrand of France, Chancellor Helmut Schmidt of West Germany, Prime Minister Pierre Trudeau of Canada, Prime Minister Giovanni Spadolini of Italy and Prime Minister Wilfried Martens of Belgium, which currently holds the presidency of the EEC Council

"Revitalization and growth of the world economy will depend not only on our own effort but also to a large extent upon cooperation among our countries and with other countries in the exploitation of scientific and technological development. We have to exploit the immense opportunities presented by the new technologies. Particularly for creating new employment. We need to remove barriers to, and to promote, the development of and trade in new technologies both in the public sector and in the private sector. Our countries will need to train men and women in the new technologies and to create the economic, social and cultural conditions which allow these technologies to develop and flourish. We have considered the report presented to us on these issues by the President of the French Republic. In this context we have decided to set up promptly a working group of representatives of our governments and of the European Community to develop in close consultation with the appropriate international institutions, especially the OECD, proposals to give help to attain these objectives. This group will be asked to submit its report to us by 31 December 1982. The conclusion of the report and the resulting action will be considered at the next economic summit to be held in 1983 in the United States of America."

International monetary undertakings.

The leaders also adopted the following statement on international monetary undertakings.

"1. We accept a joint responsibility to work for greater stability of the world monetary system. We recognize that this rests primarily on convergence of policies designed to achieve lower inflation, higher employment and renewed economic growth, and thus to maintain the internal and external values of our currencies. We are determined to discharge this obligation in close collaboration with all interested countries and monetary institutions.

"2. We attach major importance to the role of the IMF as a monetary authority and we will give it our full support in its efforts to foster stability.

"3. We are ready to strengthen our cooperation with the IMF in its work of surveillance and to develop this on a multilateral basis taking into account particularly the currencies constituting the SDR.

"4. We rule out the use of our exchange rates to gain unfair competitive advantages.

"5. We are ready if necessary to use intervention in exchange markets to counter disorderly conditions as provided for under article IV of the IMF articles of agreement.

"6. Those of us who are members of the EMS consider that these undertak-

ings are complementary to the obligations of stability which they have already undertaken in that framework.

"7. We are all convinced that greater monetary stability will assist freer flows of goods, services and capital. We are determined to see that greater monetary stability and freer flows of trade and capital reinforce one another in the interest of economic growth and employment." ○

GROUP OF SEVEN

A delegation from the Group of Seven was welcomed to EEC headquarters by Edgard Pisani, European development commissioner, on 15 April. The delegation comprising Mr Ferrandi (CIAN, the international committee for black Africa), Mr van Oudgaarden (Afrika Instituut), Mr Feyerick (CEDIOM, the Centre for the study and development of overseas investments) and Mr Hopfen, the secretary-general, was led by the organization's new president, Senator Pedini (Assafrica).

Mr Pisani gave the delegation an outline of the policy he intends following in his relations with the ACP countries and he explained how he saw the role of the private sector in the development of the Third World.

He heard about the aims and activities of the Group of Seven and told Senator Pedini that he thought the organization was a useful contact whose help he would call on when studies were run on extending the present Convention of Lomé II.

It was felt that it would be useful to have permanent contact with the Group and in mid-July Mr Pisani plans to let it have the first themes for discussion as a basis for the EEC-ACP negotiations on the next convention. ○

UN

International convention on the law of the sea adopted

After nine years of intensive negotiations, the draft of the International convention on the law of the sea was adopted in New York on 30 April 1982. There were 130 votes for the text, four against and 17 abstentions.

This new instrument, containing 320 articles and nine annexes, covers a whole series of questions, the most important ones being the status of territorial waters, the exclusive economic zone, the continental shelf, straits used by international shipping and the exploitation of parts of the sea-bed outside national jurisdiction. ○

EUROPEAN COMMUNITY

World hunger

Launching of a special EEC programme

Commission proposal for a ECU 183 m special programme

In the last three years Community bodies have devoted a good deal of time to discussing the problem of world hunger. Following a full-scale debate on the topic in October 1979, the European Parliament has played a major part in the discussions, and in the course of its June session it reviewed progress and gave its views on the future course of Community action (see below).

The Commission took this opportunity to present its latest initiative, a special ECU 184 m programme to tackle world hunger, financed from the 1982 amending budget.

In the Commission's eyes the special programme has a significance going beyond the immediate measures proposed, as part of a wider policy inaugurated with the plan of action against world hunger put forward in November 1981 and approved by the Council in

February with the aim of combining emergency aid intended for short-term relief operations (an additional ECU 40 m of food aid) with structural measures to promote rural development and self-sufficiency in food. As part of this policy a new "food strategy" is about to be launched in an attempt to improve coordination between national operations and external aid. Similarly, the Commission advocated a number of important long-term schemes—the control of desertification, water supply policy and provision of basic training, etc.—on which the future and very survival of many rural communities will depend.

In earmarking much of the money available under the 1982 amending budget for the special programme, the Commission's aim is not only to extend and consolidate the policy inaugurated in November but to try out new types of measures aimed systematically at improving the basic living standards of rural dwellers, and point the way forward for Community development policy.

Urgent measures: saving refugees

Over 4.5 m refugees and displaced persons are almost wholly dependent for their survival on international relief. In answer to appeals from bodies such as the Office of the United Nations High Commissioner for Refugees and the International Committee of the Red Cross, the Commission is proposing to grant emergency aid totalling ECU 35 m.

This aid would be directed specifically to areas where the greatest needs are still uncatered for:

— Pakistan, which has taken in almost 2 200 000 people from Afghanistan, the largest concentration of refugees in the world;

— South-East Asia, where the flow of refugees, particularly into Thailand, is continuing;

— Central America, where there are over 500 000 refugees or displaced persons;

— Angola, where there are large numbers of Namibian refugees and many displaced persons.

This emergency aid, plus food aid provided for the refugees, should make it possible to care for at least 3 200 000 people in 1982.

The importance of boosting food production

The plan of action adopted in February put the emphasis on "food strategies" and the need to improve the way in which available national and external resources are organized, so that the long-canvassed idea of giving priority for rural development can finally be put into practice. This is a new and necessary approach to cooperation.

The special programme would go further along these lines by providing more money for countries which find it particularly hard to supply their farmers with the inputs they need to improve productivity. The Commission is proposing that a total be made available for this purpose of ECU 100 m including the ECU 65 m earmarked for Central America under the plan of action for that region proposed earlier.

Of the remainder, ECU 30 m will be allocated to other regions, for least-developed countries or countries which have devised a food strategy. The money will be used to supply farmers with inputs—fertilizer, seeds, tools etc.—with they will normally be expected to buy, so that counterpart funds can be generated to supplement the "campaigns" discussed below.

The final ECU 5 m will be set aside to co-finance simple agricultural development schemes with non-governmental organizations.

Planning for the future: five campaigns to safeguard the land

The Commission wants to earmark ECU 49 m to finance five "action campaigns" aimed broadly at preserving the rural environment. All five are designed to tackle long-term problems, which often tend to be neglected owing to the pressure of short-term need. By their nature, they cover a wide spread of action, since they are concerned with basic living conditions, and can only succeed if habits and behaviour patterns change. This too is an experimental approach, which should blaze a trail for future policy.

Saving fuelwood — ECU 10 m

In many developing countries, wood is used for cooking, and the felling of trees for this purpose is one of the causes of desertification, linked to the inefficiency of traditional cooking methods which waste 75 %-95 % of the energy potential of the fuel. Economic stoves suitable for local conditions exist—their manufacture and use must be promoted.

Reafforestation and a halt to desertification — ECU 10 m

This covers a more heterogeneous set of measures ranging from the establishment of village nursery plantations to integrated remote-sensing programmes to improve our knowledge of soil use and desertification.

Village water supplies — ECU 9 m

The provision of village water supplies is vital to the existence and future of rural communities, and is at the root of any development process. It is therefore proposed to undertake integrated operations backing up the actual supply of water with action on health, more efficient use of water resources, community responsibility for the water supply and the introduction of new technology.

Livestock protection — ECU 10 m

In countries where malnutrition or hunger are rife, it is important to protect and build up the protein "bank". But this bank—the livestock population—is severely depleted by endemic diseases and parasites, and it is therefore proposed to finance a campaign to control rinderpest, contagious bovine pleuropneumonia (CBPP) and diseases transmitted by the tsetse fly, and to support research in this field.

"Training first and foremost" — ECU 10 m

Only the spread of basic education in rural areas can enable the inhabitants to play an active part in schemes for their own development. The money

will therefore be devoted mainly to the provision of training and extension services in the four fields listed above, but may also be used for basic education programmes for rural communities and vocational, and technical training for development work.

Summary

	ECU
Aid to refugees	35 000 000
Food policy support measures	100 000 000
Central America:	65 000 000
Other countries :	30 000 000
NGOs :	5 000 000
Safeguarding the land	49 000 000
Fuelwood :	10 000 000
Desertification :	10 000 000
Water supplies:	9 000 000
Livestock :	10 000 000
Training :	10 000 000
Total	194 000 000

European Parliament debates world hunger

On 16 June the European Parliament debated the question of world hunger against the background of the Michel report (EPP-B) and the call by the Italian radical MEP, Marco Pannella, for a special EEC programme of ECU 5 billion.

The rapporteur, Mr Michel, stated in his intervention that spectacular actions are not the way to solve the problem of world hunger and that it is not only a question of food aid but elaborating strategies which enable development of food production in the developing countries themselves. Mr Michel called on the Commission, the member states and also the Parliament itself, to adopt a coherent attitude in this sphere. In this way, he said, what could be achieved would not be a blitz type action of ECU 5 billion in one year, but an ongoing action of ECU 5 billion over a decade.

Pisani's view

For the European Commission, Edgard Pisani distinguished two approaches within the Parliament: the approach of the Ferrero report, which regards hunger as a "permanent evil" which requires modifications of structures, behaviour, power and knowledge, and that of the resolution adopted, without a debate, on the appeal of the Nobel prizewinners, which expressed the desire for immediate action, designed to be more compensatory than curative. The Michel report comes back resolutely to the former approach, said Mr Pisani, and he asked the Parliament to follow this approach, because it would be a political mistake to run away with the fascination of what is current. Employing critical language with regard to the approach of

Mr Pannella, Mr Pisani rejected a conception which, he said, regards hunger more as an event than as a disease. The remedies do exist, he added, and he recalled the Commission's initiatives, and in particular his own recent trips to Mali, Kenya and Zambia, which were designed to clarify the terms of the first food strategies which the EEC is preparing to support. Every strategy is different and it is a matter for the state concerned in terms of responsibilities. As for the resources which would enable contributions to these strategies to be made, Mr Pisani was pleased about the 1982 budgetary situation which made such resources available and enabled the launching of this policy. Mr Pisani pointed out that the developing countries were not able to absorb ECU 5 billion, and warned of the adverse impact on food prices that such an action would bring about.

Most of political groups supported Mr Pisani's approach and the Michel report was adapted as it stood, Mr Pannella having withdrawn his amendments after certain assurances, by 110 votes to 2. The 33 abstentions included European Democrats (conservatives), French Socialists and Marco Pannella himself. ○

EEC COUNCIL

Combating hunger in the world

At its meeting on 15 June the Council carried out a very full examination of

all the aspects involved in a new type of co-operation involving support for the food strategies of developing countries.

The following conclusions were reached:

— The Community records its readiness to support the food strategies of countries which meet the conditions required provided that those countries express the political will to take part in the exercise.

— This is a process which the Community will initiate immediately and which is likely to be amended in the light of later developments, account being taken of experience.

— The preparatory work pinpointed a number of countries which might fulfil the desired conditions.

— Three of those countries, namely Mali, Kenya and Zambia, have sent a request to the Community, which has agreed to give them a positive reply.

— Exploratory talks are in progress with other countries. The development Council will examine at its next meeting any requests sent to the Community.

The Council also agreed to any donor agreeing to take the same course of action as the Community and its member states of associating itself with this operation.

North-South dialogue

The Council held an exchange of views on progress in the North South Dialogue. In the spirit of the conclusions of the Versailles Summit, the Community will support the efforts to be begun shortly in New York, on the

basis of the draft resolution submitted recently by the Group of 77, with a view to reaching quickly a consensus to enable the global negotiations to be opened effectively.

Role of women in development

The Council examined the guidelines it might adopt for its future work concerning the role of women in development. The purpose of these guidelines is to make its work as practical as possible in order to make an effective contribution, using the Community's means of assistance, towards aiding the developing countries to face the problems resulting from under-development as far as women are concerned and to ensure that women participate in development.

Evaluation of community aid

The Council carried out an evaluation of Community aid in urban areas.

While seeking to maintain the priority of Community aid for rural development, the Council recommended that a study be made by the permanent representatives committee and the Council working parties to enable suitable solutions to be proposed to developing countries contending with the difficult urban problems.

Energy cooperation

The Council then adopted a resolution on cooperation with developing countries in the energy sphere. ○

AWARDS

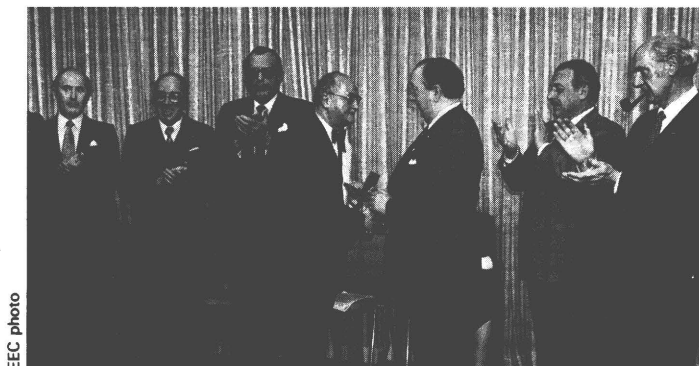
A number of people have received European order of merit awards over the past few months.

Gold medals were awarded to Mathias Berns, former ESC president, and to Thomas Roseingrave, the Committee's president in office, at a ceremony in the European Communities press and information office in Dublin on 16 April.

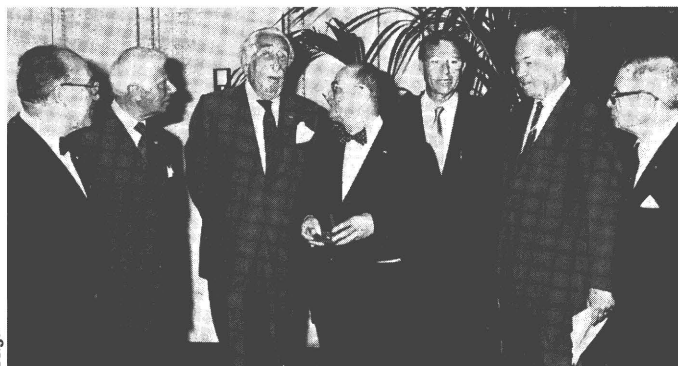
(Left, from right to left) Jack Lynch, Ireland's former Prime Minister, a gold medallist in 1981, Roger Louet, secretary-general of the ESC, Thomas Roseingrave, François Visine, Mathias Berns, Florent Bonn and Richard Burke, member of the Commission.

At an evening ceremony in Brussels on 7 June, Baron Snoy et d'Oppuers awarded three gold, four silver and two bronze medals and five diplomas of honour of the European Order of Merit and made a speech in which he looked back on the signing of the Treaty of Rome.

(From right to left) Jean Rey, former president of the Commission and a gold medallist in 1980, Baron Snoy et d'Oppuers, Paul de Keersmaker, current president of the EEC Council of agricultural ministers, François Visine, the founding president of the Order, Count Boël, former international president of the Organization for European Economic Cooperation (gold medallist), Max Kohnstamm, former president of the university institute in Florence (gold medallist) and Florent Bonn, chairman of the Brussels circle of European merit. ○



EEC photo



Belga

Centre for
Industrial Development
(ACP-EEC Lomé Convention)



Centre pour le
Développement Industriel
(Convention ACP-CEE de Lomé)

INDUSTRIAL OPPORTUNITIES

No 27 — July 1982

Opportunities for EEC firms

BENIN

Expansion of furniture manufacture

A company in Cotonou with a turnover of approximately US \$ 0.75 million for the manufacture of furniture in wood, upholstery and metal, intends to expand its activities. It is looking for an EEC partner who will provide technical and financial help, with eventual equity participation. Interested EEC investors are asked to contact the CID quoting reference 82/25a, giving details of their current activities and experience in this product market.

Manufacture of flush and cupboard doors

A Benin sponsor intends to manufacture a range of flush doors, cupboard doors and internal partitioning. He is looking for an EEC partner who may be able to supply technical and financial help in setting up the project.

Interested EEC firms are invited to contact the CID, quoting reference 82/26a, giving details of their current operations and experience of this product market.

Animal and poultry feed manufacturer needs a partner

A factory in Benin with a capacity of approximately 900 tonnes of various animal feeds per annum is looking for technical and financial help, including equity investment, to overcome existing problems. Interested EEC firms are asked to contact the CID, quoting reference 82/27a, and giving details of their current operations and familiarity with this product market.

Joinery and cabinet makers seek partner for expansion

A Benin company with a turnover of approximately US \$ 2 million currently manufacturing a variety of furniture, builders joinery and wood frames, wishes to expand its capacity. It is looking for an EEC partner who might provide the necessary financial and technical help, and to whom a share in the equity is offered. Interested EEC firms and investors are asked to contact the CID quoting reference 82/28a, giving full

details of their current operations and familiarity with this type of operation.

CENTRAL AFRICAN REPUBLIC

Existing nail manufacturer seeks to diversify

An established nail factory in the Central African Republic with a production capacity of 35 tons a month for the local market, is seeking to diversify. To this end the local sponsor is looking for an EEC partner who may be able as a joint venture, to provide financial assistance. Interested EEC firms should contact the CID quoting reference 82/29a giving full details of current activities and experience in this product market.

Metal furniture factory wants partner to expand

An established factory producing all types of metal furniture for the local market is looking for a joint venture partner to provide technical and financial assistance to help with modernizing production equipment and diversification plans.

Interested EEC firms are asked to contact the CID quoting reference 82/30a, and giving full details of their current activities.

GRENADA

Forest industry complex wants joint venture partner

Forestry Development Corporation (FDC) intends to develop a central Forest Industry Complex with a saw-mill and a Timber Utilisation Centre.

The complex is intended to fulfil local demand for air-dried planed boards, poles, posts, fencing, charcoal and eventually particle or wafer board, the majority of which is currently imported. The FDC is looking for a joint venture partner willing to take up a share of the equity investment as well as arranging loan finance and providing technical assistance and training.

Interested EEC companies should write to the CID, quoting reference 82/31a, giving full details of their current activities and familiarity with this type of operation.

GUYANA

Existing hollow glass manufacturer seeks joint venture partner

State Corporation is looking for a joint venture partner prepared to invest in the equity and provide technical, managerial and training assistance for the expansion and start-up, of an existing glass plant. Furnace capacity is sixty tons per day and the container glass production capacity is planned to be just under fifty tons per day. The production is intended for both the Guyanan and Caricom markets. A feasibility study has been made and interested EEC firms are asked to contact the CID, quoting reference 82/32a, for further information, whilst giving details of their current operations and familiarity with this product.

JAMAICA

Particle board manufacture from local wood waste

A Jamaican company intending to manufacture resin-bonded particle board from local wood waste and to enter the plastic laminated board market is looking for a potential EEC joint venture partner.

The company foresees fifty percent of its sales on the Jamaican market and the balance exported to other Caricom countries.

Ideally, the potential partner will provide additional investment, training assistance, and technical know-how.

Interested EEC firms are asked to contact the CID quoting reference 82/33a, giving details of their current activities and familiarity with this product market.

MALI

Plastic shoe manufacture

A Mali trading company intends to manufacture shoes and other items in plastic for the local market. Envisaged capacity for shoes is between 250 000 and 600 000 pairs per annum in a market currently estimated at 3.6 million pairs per annum.

The company is looking for an EEC partner who might be able to supply technical assistance and help in training local staff. Interested EEC firms are asked to contact the CID, quoting reference 82/34a, and giving details of their current activities and knowledge of this product market.

MALI

Suitcases and travel goods

A Malian promoter, engaged in import-export of goods and collecting hides and skins, is keenly interested in finding EEC joint venture partners for the implementation of a travel goods factory, with the following capacity:

- suitcases made of carton and skai: 125 000 pieces/year;
- suitcases and diplomatic bags made of skin: 70 000 pieces/year;
- handbags and wallets made of skin: 35 000 pieces/year;
- belts and other articles made of skin: to be determined.

The project is promoted with the assistance of the Centre d'Etudes et de Promotion Industrielle—CEPI.

A 30% equity share is offered to the joint venture partners, who are also expected to provide technical know-how and commercial assistance.

Interested firms are asked to contact the CID quoting reference 82/35a, for further information and to give details of their current operations and experience in the product market.

Industrial cooperation offers from EEC firms

Manufacture of agricultural spraying equipment

A Dutch company specializing in the manufacture of a range of portable and self-propelled spraying equipment for plant protection is interested in establishing manufacturing facilities in ACP countries. Experienced in starting up small plants in Third World countries, the company is able to supply management, marketing, and technical know-how and, possibly, equity investment. Interested ACP firms and investors are asked to contact the CID, quoting reference 82/36a, and giving full details of the nature and range of their current commercial activities.

Manufacturing plants for tractor-drawn agricultural equipment and egg grading and packing equipment

A major group of companies in the Netherlands is interested in establishing manufacturing operations in ACP countries for a range of agricultural equipment comprising tractor-drawn machinery (for soil preparation, mowing, harvesting, baling, etc.) egg grading and packing machinery and pumps. The company is looking for potential ACP joint venture partners and is able to offer management, finance, marketing, training and technical assistance to the eventual partnership. Interested ACP firms are asked to contact the CID, quoting reference 82/37a, and to give full details of the nature and scope of their current commercial operations.

Joint ventures in metal furniture and office equipment

A Dutch company specializing in the manufacture of metal furniture and office equipment is interested in manufacturing in ACP countries through the medium of joint ventures. The company, a member of a large group, is able to supply equity investment, management, marketing, production know-how and training. Interested ACP firms are asked to contact the CID quoting reference 82/38a, giving full details of the nature and scope of their current commercial activities.

Shoe manufacture for local and export markets

A United Kingdom shoe manufacturer is looking for an ACP partner with a view to developing, on a joint venture basis, manufacturing facilities in an ACP country for both local and export markets.

The U.K. company as well as being prepared to invest in the equity of the joint venture is able to offer management, marketing, technical know-how and manufacturing assistance. Interested ACP firms are asked to contact the CID quoting reference 82/39a indicating their current activities and technical, management and marketing experience.

White fish for export to Germany

An old established German company with an important share of the fresh and frozen fish market is ready to provide equity capital, know-how, guaranteed markets as well as the advantages of an old established trade-mark to a joint

venture partner. The company is particularly interested in hearing from private ACP investors involved in the fish industry in Cape-Verde, Ivory Coast, Mauritania and Senegal or other countries with available industrial quality white fish resources. Interested ACP investors should contact the CID quoting reference 82/40a, giving full details of their current commercial activities.

Manufacture of wind-powered equipment

A German company, expert in the application of wind power to mills, and in electricity generation in tropical countries, is looking for a joint venture partner in an ACP country, preferably Kenya, Senegal or Sudan, or the Pacific. The company offers equity capital, all know-how, patents, licenses, etc. Interested ACP investors are asked to contact the CID quoting reference 82/41a, giving full details of the nature and scale of their current commercial activities.

Biomass energy systems manufacture

A private German company, with considerable experience of agricultural and forestry machinery wishes to establish joint venture with ACP manufacturing partner to build biomass briquetting energy systems for wood and agricultural waste utilization. Equity capital, training and management help available. Interested ACP manufacturers should contact the CID quoting reference 82/42a, detailing the nature and scale of their current manufacturing activities.

Dried vegetables, fruit extracts, herbs for export markets

A well established German company supplying food industries, hotel chains, and caterers, wants to import large quantities of dried vegetables, tropical fruit (dried, and extracts), and special herbs for pharmaceutical, cosmetics and aromatics industries and is looking for a joint venture partnership. Apart from equity capital and marketing help the company offers technical know-how for cultivation, seed selection and processing. The company is particularly interested in hearing from potential ACP partners in the private sector who should contact the CID and quote reference 82/43a, giving full details of their current commercial activities.

Charcoal plant manufacturing licenses

A Belgian company, specializing in the manufacture of charcoal ovens for which high levels of efficiency in wood conversion are claimed, is looking for licensees to manufacture the plant in Africa. Interested ACP firms in Africa are asked to contact the CID, quoting reference 82/44a, detailing in full the nature and scale of their current activities.

Manufacture of biogas plant

A private German engineering and manufacturing company is seeking a joint venture partner in Northern Nigeria and the Caribbean to manufacture biogas plants and related equipment. The company is offering considerable equity investment, technology transfer, technical know-how, management and training.

Interested ACP investors in Northern Nigeria and the Caribbean are asked to contact the CID quoting reference 82/45a, giving full details of the nature and scale of their current commercial activities.

Manufacture of solar energy plants

A German private company, specialized in solar-powered equipment for tropical and sub-tropical regions, such as salt-making, water desalination, drying fish, heating water, etc., is looking for a joint venture partner. Equity investment capital, technical know-how, training and technical management

will be provided by the company which is seeking an ACP partner, preferably in Ivory Coast, Kenya, Senegal or the Pacific. Interested ACP investors are asked to contact the CID quoting reference 82/48a, detailing the nature and scale of their current commercial activities.

Production of industrial bakery ovens

An Italian company specializing in the manufacture of ovens for industrial bakeries is interested in establishing a production unit in an ACP country. It is able to offer marketing, design and technical assistance. Interested ACP firms are asked to contact the CID quoting reference 82/47a, giving full details of the nature and scope of their current commercial activities.

Aluminium can manufacture

A major Italian company specializing in aluminium products is looking for a local partner in an ACP country with a view to the manufacturing aluminium cans for food, drink, etc. The company is able to supply all technical, manufacturing and marketing know-how. ACP firms interested in this project should contact the CID quoting reference 82/48a, giving full details of the nature and scope of their current activities.

Results of CID assistance

Mali — Karité butter

Joint venture agreement signed

On Friday, the 7th May 1982, a number of agreements covering the financing of a joint venture were signed at the offices of the Société Belge d'Investissement International (SBI) in Brussels. The company involved, the Société Industrielle de Karité du Mali (SIKA-MALI), situated in Banankoro (Bamako) will process locally abundant karité nuts into karité butter, thereby adding value to this Mali export and creating about 230 jobs. Start of production is planned for 1983.

Following the signing of contracts, Mr. Drissa Sangaré, Président du Conseil d'Administration said: "This signing is the culmination of more than two years tireless work on everyone's part. The investment cost of 5.875.000.000 Malian francs with capital of 1.875.000.000 Malian francs has been the object of laborious and sometimes even difficult negotiation, but willingness and realism from each of us finally brought it about".

He went on to say: "The participation of financial institutions like SFI, the DEG, SBI, Sifida, plus the CID assistance, and the technical, commercial and financial cooperation of the Vandemoortele Group, constitute a guarantee for the project's success".

In 1979 the CID, in liaison with SBI, found the technical partner and then co-financed an export market study. In acting also as a neutral mediator between the future partners in assessing the value of factory buildings financed by the local promoter, the CID enabled negotiations to proceed in a good atmosphere and with the least delay.

Sudan — Sorghum flour mill

New plant commissioned

After successful production proving tests, the Sudan's first sorghum flour mill in Wad-Medani was commissioned on May 15, 1982. The mill was specially designed to produce sorghum flour on a small scale, for the supply of smaller towns. Its capacity is 2 tons/hour; fixed capital investment is US \$817,000.

Shareholders are the Sudan Development Corporation (SDC), private Sudanese investors, the Industrialisation Fund for Developing Countries (IFU) in Copenhagen, and the Danish firm United Milling Systems (UMS), which also supplied the technology.

In 1979, the CID introduced UMS to the Sudan Development Corporation, and advised on financing possibilities. The CID is currently considering financial support for the training of Sudanese technicians.

Further sorghum mills of the same type are planned in other provinces of the Sudan.

Mauritius — Grain processing complex (National Trading Co) ADB — loan agreement signed

In February 1982, the Government of Mauritius signed an agreement with the African Development Bank (ADB) for a loan of 10 million U.A. (11.5 million US \$) for the financing of a grain storage, processing and packaging complex in Port-Louis. Total investment will be US \$20 million. A further loan of US \$8 million is expected to be provided by the Arab Bank for Economic Development in Africa (ABEDA) in Khartoum.

The grinding capacity of the complex will be 450 tons per day. About 100 jobs will be created. Start of production is planned for 1985. The complex will be fully government-owned.

The first preliminary study on a wheat flour mill only was undertaken in 1979 and financed by the CID. A further UNDP-financed study was carried out in 1980/81 to investigate the feasibility of a larger complex covering both wheat and rice, and in particular the problem of storage facilities.

Cape Verde — Mini-cement plant Completion of geological work

In March 1982, geological work for a mini-cement plant on Cape Verde was completed. Important new limestone deposits were discovered which provide an excellent raw material base for the proposed plant.

The cost of the geological work, which included surveying, drilling and laboratory tests was shared equally between the Cape Verde Government, the CID and CBR (the Belgian joint venture partner).

The techno-economic feasibility study was completed in 1980, and a meeting between the Cape Verde Government, CBR and several interested financial institutions is scheduled for October 1982 to finalise financing arrangements for the project.

In-CID industrial promotion programme for ACP experts

From April 19 to July 13, 1982, five representatives of the CID's official antenna organisations in Benin, the Central African Republic, Chad, Ivory Coast and Togo have been temporarily attached to the CID under its industrial promotion training programme. All five ACP experts occupy senior posts in the industrial promotion organisations of their countries.

The main purpose of this programme is (a) to allow senior staff from the CID's antenna organisations in the ACP countries to familiarise themselves "on the job" with the activities and working methods of the CID, and (b) to promote specific industrial cooperation projects in their home countries, by way of direct contact with European industrialists, industry federations and financial institutions.

Thus, the ACP experts have been able to establish personal contact with many potential industrial partners in the EEC during their three months stay. Many firms have been visited and useful first contacts made, which have led in several cases to visits by European industrialists to ACP countries, and to feasibility studies or expert missions. Altogether, more than thirty industrial projects including several rehabilitations of existing industries have been handled. The five ACP experts also participated in the CID's promotion meeting with German industry in Hamburg on May 27, 1982, and provided valuable inputs to the sectoral meeting for the metalwork and engineering industries which the CID held in June 1982 in Brussels.

The CID attaches considerable importance to this programme as the ACP experts will, on their return, reinforce their parent organizations in their activities as CID antennae.

The next course for five anglophone ACP countries will take place from September 13 to December 12, 1982.

Second metalwork sector meeting

During week commencing 22nd June 1982 the second CID metalwork and engineering sector meeting took place.

It was attended by ACP industrial project sponsors from French-speaking Central African countries identified by CID consultants who visited Burundi, Cameroon, the Central African Republic, Chad, Congo, Equatorial Guinea, Gabon and Zaire.

A more detailed report will appear in the September/October issue of the Courier.

CID promotion in Denmark

In its continuing promotional programme in EEC countries, Denmark will be the target of CID activity on 21st October 1982.

In cooperation with the IFU and the Danish Federation of Industry the CID will be introducing itself to Danish financial and industrial institutions and representatives of Danish industrial companies at the Industriradets Bygning, Raadhushuset in Copenhagen. Additionally, a wide range of industrial opportunities in ACP countries for Danish firms will be available for discussion with CID staff and in some cases the ACP sponsors themselves.

Interested Danish companies and investors wishing to attend this meeting and to avail of the advantages offered by CID assistance, are asked to contact the CID at its Brussels address. If they are able to supply details of their particular product and market interests the CID may be able to put them in touch with individual ACP principals to be invited to the meeting.

1981 — A year of change for the CID

1981 was not the first year of the Centre's operation under Lomé II, but it was the first year in which its changed orientation and large scale operations took effect. It was a year of tremendous changes for the Centre.

In order to meet its new obligations and objectives the Centre's staff was considerably increased although on average by the end of the year more than half of the professional staff had been with the Centre for only six months. In spite of this major internal change the Centre managed to undertake some new activities over and above the regular handling of requests for assistance from the ACP countries, which, incidentally, increased significantly. Specifically, the Centre increased its presence in the ACP countries in a variety of ways to generate both new requests for assistance and improve on effective follow-up. The Centre was also able to improve its own infrastructure as well as improving the contacts between the CID and ACP countries.

The climate for industrial cooperation

In 1981, the world industrial climate continued to be one of recession. Since its conception the Centre has had to operate and meet its objectives in such a climate. 1981 saw an aggravation of this climate, and the ACP countries continued to bear the effects of it. Although during missions the Centre has found the general attitudes towards private participation are changing positively, the problems of foreign exchange worsened. This made it necessary for the Centre to give more emphasis to assisting existing industries and new industries with little or no import content.

This foreign exchange situation has increased the importance of generating foreign exchange and risk capital in the EEC but, at the same time, has, in the eyes of the European development finance institutions and guarantee organisations, reduced the abilities of more ACP countries to honour their financial commitments.

Continuing high unemployment and poor profit performance in many sectors of European industry made it difficult to generate interest among European industrialists towards investment in, or the redeployment of industry to ACP countries. Redeployment, particularly, met with resistance in most EEC countries through fear of possible union reaction.

An increased CID presence in ACP countries

In this unfavourable industrial climate, forty five ACP countries were visited during 1981 by the CID Directorate and staff. The purpose of these missions was to create closer ties between the individual ACP countries and the CID. Additionally, they were to speed up and improve both the numbers and quality of the requests for assistance from ACP countries.

Some of the missions were followed up at a later date by commissioned *roving experts*, who applied their industrial expertise to the substantiation of projects previously identified, such as in leather and fruit juice production. Experts also visited Eastern, Central and Southern Africa countries to substantiate proposals for presentation at the Centre's first metalwork sector meeting, which was held in February 1982.

Two information seminars were also held by the CID in Fiji and Jamaica, which were attended by participants from

almost all Caribbean and Pacific States. Working sessions at these seminars revealed a significant need for CID's assistance and have since led to both new requests from the countries involved and a CID commitment to send wood industry experts to relevant countries in both regions.

The CID missions and seminars created a new awareness of the industrial potential in the individual ACP countries and confirmed the justification of paying greater attention to the rehabilitation and expansion of existing enterprises.

The Centre is convinced that attitudes to foreign investment and joint ventures are becoming more positive of late, resulting in changes in investment codes, making them more attractive to the foreign investor. The Centre is also convinced that European industry could benefit from being more open-minded towards joint ventures with ACP businessmen.

Improved CID/ACP interface

Operations under Lomé I proved the necessity for a stronger CID presence in the ACP countries. The infrastructure of antennae and correspondents in the ACP countries has been strengthened through the many missions undertaken in 1981, appointing numerous institutional antennae and several private ones. However, this is still a weak link in the Centre's operation, as the Centre does not have funds to support properly the work of such antennae. Early in the year the Centre had advocated the establishment of an Industrial Cooperation Expert Programme to be financed out of the European Development Fund, consisting of the establishment of industrial experts in various regions covering two or more countries, to provide not only liaison with the CID but also the know-how to substantiate, diagnose and follow up projects for joint ventures. This Programme has now been positively received by the Commission for the appointment of some ten experts initially, if and when the ACP countries so request. It is expected that the Programme could greatly enhance the services that the Centre can provide to each ACP country.

CID promotion in EEC countries

Official visits were made to most EEC countries in 1981 to reinforce cooperation with institutional contacts and a programme of promotional meetings to increase awareness of the CID and available investment opportunities was started in Luxembourg and Belgium. Roving experts were also used in Europe to identify potential partners in the metalwork sector leading up to the meeting in February 1982.

Improved CID infrastructure

During the year, the Centre's Headquarters Agreement with the Belgian Government was approved. New office premises at 28, rue de l'Industrie, 1040 Brussels, were acquired in November 1981 to accommodate both the increased staff, totalling thirty eight, and a maximum of six promotion officers from ACP countries, who are invited annually to the Centre to gain more experience in the development and promotion of industrial projects. New procedures, to ensure the smooth running of an expanded organization—with regard to finance & personnel and operations conforming to the Statutes—were completed.

Special effort was made to improve the Centre's documentation service to both CID staff and the ACP world,

particularly by improvements in data retrieval by computer.

Overall results of the year

As a result of the many missions, there was of course an increased number of requests coming in, particularly towards the end of the year. However, many more are expected as roving experts are sent out to substantiate the already identified projects, which the institutional antennae have often have difficulty in doing.

In spite of the Centre's now much more stringent requirements (commitments from both jointventure partners) for accepting participation in the cost of feasibility studies, twenty-one studies were initiated in 1981, compared to thirteen in 1980. Projects under implementation were fifteen at the end of 1981, compared to thirteen in 1980. Projects that entered the production stage were four in 1981, giving a total number of ten that have entered production since the Centre's start in 1977; and this in spite

of the continuously deteriorating foreign exchange situation in the ACP countries.

Projects providing expertise or rehabilitation assistance have amounted to thirteen in 1981, as in 1980.

These projects are rather evenly distributed to the six regions, taking into account their size.

However, the statistical analysis shown in the above chart demonstrates the full range of assistance to projects committed during the year—amounting to more than a hundred, where CID has provided essential inputs either through its staff (e.g. studies) or through a financial contri-

In conclusion

In its Annual Report for 1981 the Centre has chosen to report the major projects and CID activities for each ACP country. This method, whilst only a summary, gives a good indication of the volume and variety of assistance undertaken by the Centre.

CID PROJECT ASSISTANCE - 1980/81

Type of assistance by ACP region

TYPE OF ASSISTANCE	TOTALS		ACP REGIONS											
	1981	1980	AFRICA								CARIBBEAN		PACIFIC	
			WEST		CENTRAL		EAST		SOUTHERN		1981	1980	1981	1980
			1981	1980	1981	1980	1981	1980	1981	1980				
Expert ACP visits for project identification and substantiation	31	—	3	—	1	—	9	—	6	—	7	—	5	—
In-Plant & In-CID Training	15	14	6	3	2	4	6	5	—	—	1	1	—	1
Project sponsors' Travel assistance	23	6	3	3	7	—	8	—	2	2	2	—	1	1
Technical Expert Assistance	13	13	6	3	3	5	1	2	2	1	1	—	—	1
Feasibility market and related studies	21	13	9	5	5	2	5	4	2	—	—	2	—	—
TOTAL	103	46	27	14	18	11	29	11	12	3	11	3	6	3
NEW ENTERPRISES/EXPANSION														
Entered production	4	6	2	2	1	1	1	2	—	—	—	—	—	1
Under implementation	15	13	2	2	5	3	8	8	—	—	—	—	—	—

Fourth Meeting under Lomé II of the CID Advisory Council

On 27 April 1982 the CID Advisory Council held its fourth meeting under the Lomé II ACP-EEC Convention. In accordance with art. 81 of the Convention, the Advisory Council has the task of advising and assisting the Centre in the pro-

gramming and development of its industrial activities. The advisory Council, comprising ACP and EEC people, is consulted by the Director, when appropriate, on any proposed operations and on important matters arising from the activities of the CID. It may also, on its own initiative, make any suggestion or submit to the Director any question that it believes useful. It gives its opinion on the budget, work programme and annual report.

Council members from Barbados, Belgium, Fiji, France, Gabon, Ireland, Ivory Coast, Lesotho, Netherlands, Trinidad and Tobago, and the United Kingdom were present.

The main items discussed were the CID 1981 activity report and accounts, and ideas about future functioning of the Centre in its investment promotion activities. In addition, the Council discussed the experience gained by the CID during the promotional meetings held with industrial federations and chambers of commerce in EEC countries this year. The Council praised the quality of the documents presented and made various constructive recommendations. The documents submitted by the Directorate, with some amendments proposed by the Advisory Council, were adopted for further submission to the Committee on Industrial Cooperation, the CID's supervisory body.

CID assistance in training key industrial workers

One of the major problems which faces industry in developing countries is the shortage of skilled management and key shop floor personnel. This group of people can represent the difference between success for failure in an enterprise by their influence, often decisive, on productivity, quality control and reliability. The CID offers a solution to this problem, based (as is much of its work) upon the concept of mutual partnership between the ACP and EEC countries and their respective industrial organizations and enterprises.

Two approaches

Two options are available to provide practical training for ACP industrial personnel either within an ACP enterprise or in a suitable European factory.

1. CID can identify an expert instructor, from within the EEC, from another ACP country or elsewhere, who is sent to the factory for an appropriate period of up to three months. This type of training is particularly appropriate where there are a number of people to be trained in the same or related skills, so that the costs may be correspondingly divided. Additionally, the trainees benefit from remaining in their normal working environment, using the tools or equipment to which they are accustomed.

2. Where a single key worker is to receive training, or where new or improved technology is to be learned, it may be more appreciated to arrange for the training to be carried out in one or more of the countries of the European Community. Where new plant or equipment is on order for the ACP enterprise, it may be essential for one or more industrial staff, who will have the responsibility for operating the equipment, to receive a period of training either with the equipment manufacturer or in the factory of a European (or ACP) enterprise using the same type of plant.

Tailored assistance

Whichever option is selected, the CDI can tailor the assistance according to the individual circumstances of each case. Normally, the majority of external costs of training, such as the travel costs and a daily subsistence allowances during the period of stay in Europe, would be covered by the CID together with whatever arrangements may be necessary for locating an appropriate organization to provide the training and for its supervision. The sponsoring ACP organization would be expected to cover any local costs involved and to maintain the normal remuneration of the employee during his or her period of training.

Where a consultant instructor is engaged to carry out training within an ACP organization, the costs are normally shared on a similar basis, although variations may be negotiated according to the needs and financial considerations of each case.

Variety of training

During the past year a number of useful projects were completed, and the following examples may help to illustrate

the wide range of training undertaken as part of the ACP/EEC industrial cooperation under the Lomé Convention.

(i) A Kenyan maintenance supervisor was sent to a brickworks in Italy to study and improve his knowledge of operation and maintenance of brick and tile manufacturing.

(ii) Tanzanian trainees were sent to a biscuit manufacturing plant in Europe to study biscuit technology and processing.

(iii) A trainer was sent to Mauritius to train workers in a cottage industry to produce high quality leatherwork for import into Europe.

(iv) Two Nigerians have been trained in brewing and malting with one of Europe's largest brewery companies.

Each year up to 40 training projects may be undertaken, and there are still opportunities, either for this year or next, for additional applications. Any initial enquiries on the subject should be sent to the CID.

The best basis for obtaining CID assistance

In seeking assistance from the CID for a training project, three criteria should be borne in mind by the enquirer.

First, the training should be directed towards the solution of a specific problem, related, for example, to productivity, an improvement in quality or a process change.

Secondly, the possibility of partnership with the training company in technical or financial matters, should be considered, where this is appropriate, to complement the training itself.

Finally, it should be noted that the principal objective of the CID's training schemes is to improve industrial performance rather than to provide opportunities for individual advancement.

Method of application

In order to initiate a training project the ACP sponsor (who may be a manufacturer, a promoter of a new enterprise, or a public body) should make an application to the CID on behalf of the trainee in accordance with a straightforward procedure, details of which are obtainable from the CID in Brussels or its local representative.

CID mission to Mali

A Centre of Industrial Development (CID) mission, led by Mr. Jens Mosgard, Director of the CID and including Mr. Jean Razafindrasoava, Deputy Manager of the Technical Operations Division, visited Mali in early May.

The objectives of the mission were to:

— reinforce the CID's work relationships with the government, industrial development institutions, and other contacts;

— and to identify industrial projects that may require the various forms of assistance that the CID can provide in co-operation with EEC industry.

The worldwide industrial recession has affected Mali with the problems experienced by so many other ACP countries.

At all levels, the mission found intense interest in the contribution that CID assistance can make to Mali's industrialisation efforts.

The mission met Mr. R. T. N'DAW, Minister of Industrial Development & Tourism, the Director General of International Cooperation, as well as the heads of the Chamber of Commerce and Industry, the National Federation of Employers, and the National Development Bank.

The local authorities met by the mission showed particular interest in two proposals made by the Centre:

— the concept of the Rural IDE which can provide many of the industrial infrastructure skills and training resources vital to ACP industrialisation at the grass root level;

— the installation of a permanent Industrial Cooperation Expert whose services could be shared by Mali with one or more neighbouring countries. The purpose of such an expert, who could possibly be financed out of the individual countries' indicative programme (EDF), is to identify new industrial potential and to help ACP entrepreneurs with the experienced, practical, industrial advice and encouragement to bring such projects to fruition.

In the interim it is expected that CID's antenna in Mali, the «Centre d'Etudes et de Promotion Industrielles» (CEPI), will be able to allocate additional capacity to enable a better utilisation of the services of the CID. Mr. DOUMBIA, CEPI's

Director General, has already been active on CID's behalf, not the least during the visit of the mission.

In connection with CID's planned agro-food industries meeting in October and for project preparation in general (also for the Dakar Forum), the CID will send two roving experts to Mali in June and July. All least developed countries in the ECOWAS region will during these two months receive a project identification mission covering all important industrial sectors in their countries, whereas the more developed countries will receive a substantiation mission only related to the agro-food industries.

The Chamber of Commerce and Industry took particular interest in the visit of the mission, arranging two meetings with groups of industrialists, who now—in particular for their existing industries—look forward to the visit of the above-mentioned experts for further substantiation of their ideas.

CID'S FIRST MEETING
for the
FOOD INDUSTRY SECTOR
of
ECOWAS COUNTRIES
OCTOBER 1982
(A Forerunner to the Dakar forum)

The third sectoral meeting to be held by the CID in 1982, and the last planned for this year, will take place in Brussels during the week commencing October 26th, 1982.

The meeting will be devoted to the promotion of food-industry projects from the member countries of the Economic Community of West African States (ECOWAS).

The objectives for the sector meeting, as for those held earlier this year are:

- to present for discussion specific industrial opportunities in the area of joint ventures, expanding and strengthening existing enterprises, technical assistance, etc;
- to introduce the concept of rural development enterprises and to promote interest and commitment to their establishment;
- and to inform participants about the CID and the assistance it can give to ACP industrial development.

The CID will be sending both ACP and EEC consultants to each ECOWAS country to identify relevant projects and ACP sponsors. The meeting is expected to be attended by about thirty ACP project sponsors and a similar number of EEC prospective investors and industrialists. It is intended that the meeting should complement the Dakar Forum in November, since the Forum will be able to take advantage of the projects identified by the CID for its meeting.

It is obviously impossible for the CID to invite all ACP project sponsors to Brussels, therefore invitations will be extended to those project sponsors whose projects are relatively well documented to ensure meaningful discussions with prospective investors. The CID will be covering the travel costs of ACP sponsors invited and will provide a daily allowance.

It is anticipated that EEC entrepreneurs attending the meeting will also bring project proposals of their own which they will be able to explore with ACP entrepreneurs.

Sponsors of properly documented food-industry projects in the ECOWAS member countries and EEC industrialists interested in attending this meeting are asked to write to the CID at the address below, together with full details of their project proposals, and their requests will receive the CID's consideration.

Centre for Industrial Development
28, Rue de l'Industrie,
1040 Brussels
Belgium
Telephone: (02) 513 41 00
Telex: 61427 cdi b



A palm nursery. Palm oil is in much demand, but its more extensive cultivation could produce an imbalance in forest cover

► *So first of all, a national approach before an international one?*

— I don't know that it is a question of the one before the other. I think that the two should perhaps go in parallel, and sometimes an international conference is the best way of stimulating national action.

► *How is population growth detrimental to forest land?*

— Let us come back to what I said earlier: that the main reason why forest is being destroyed, particularly in the tropics and sub-tropics, is through conversion to agriculture. This is a direct effect, I think, of the growth of human population — not necessarily only in the countries in which the forest is being destroyed, but because of the growth of human population everywhere, the demand for produce is increasing. This may not do much harm unless it leads to over-exploitation, but in many of the drier parts of the world the forest is being completely destroyed for firewood and what is being left is a completely treeless landscape. In the more humid tropics, shifting cultivation, which is very largely due to an increase in population and also to the migration of landless people into the forest is leading to destruction of the forest and its replacement by what is often a very unsatisfactory kind of agriculture. So although over-population or the increase in population is not the only cause by any means, and not always direct cause, of the destruction of forests, as long as the population increases in these areas, the hope for restoring the forest or arresting the speed of destruction is rather small.

► *How do you think the destruction of the forest can be stopped in the tropical regions and the world in general? What kind of solution do you see?*

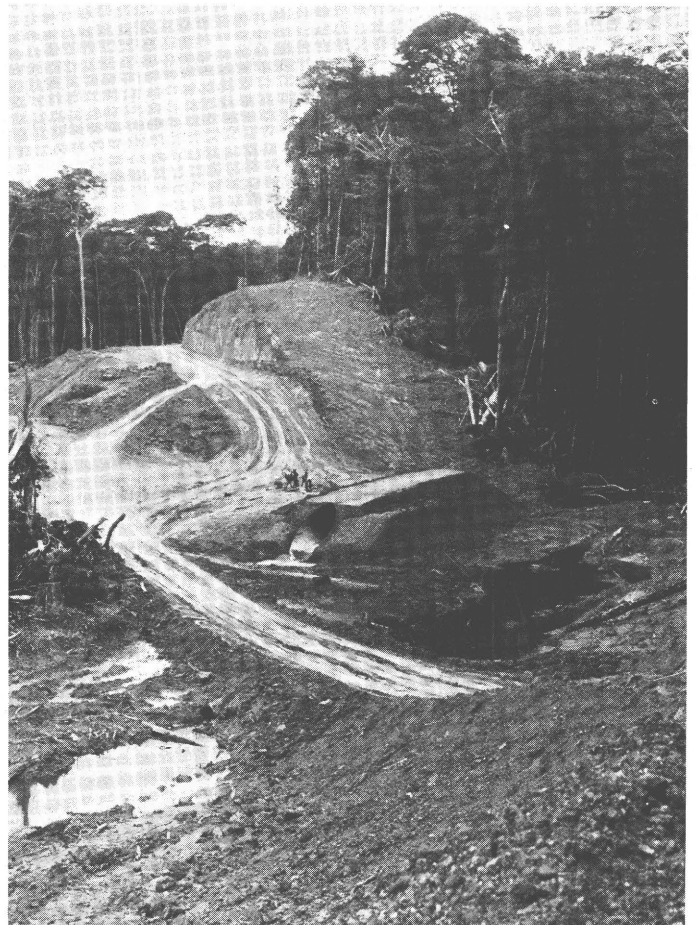
— I think it is most crucial that the management of forest lands should be considered by national governments as a matter of very high priority, demanding their highest atten-

tion and quite a bit of investment. Many countries look upon natural forests as something which you mine and which leads to growth in foreign exchange. This is alright to a certain point in virgin forests. But really they have to consider the health of the forest resource itself as of even more importance in the gaining of foreign exchange. So my first point is that this must become a very high priority in government policy.

The next is good land use planning, and this means trying to use each piece of land for the purpose for which it's best suited. It will mean setting aside natural reserves and national parks, in a well chosen sample of the country. Deciding what areas of forest must remain in order to protect catchments, what areas of forest should be managed for sustained yield and what areas are suitable for conversion to agriculture. Good land use planning must also be accompanied by good regulations. It's no use having good plans if they're not being implemented. So, good land use planning, and beyond that, I think a high standard of land management. But absolutely basic to this seems to me to get people to understand the importance of forestry in their own lives.

Most people who live in the countryside throughout the world in developed and in developing countries, do understand a certain amount about agriculture; many people farm, they get their food from it and they get direct income from it. But forestry has tended to be something that is done by governments, not by people. And I believe we won't really succeed until the people who live on the land are also concerned with managing the forest resource. They should understand why it is there and what its importance is for them. They have a vested interest in looking after it themselves. ◦ Interview by L. P.

Better exploitation and management is the way to preserve forest resources

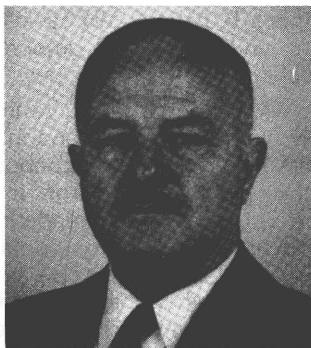


Forestry research

Research into tropical forestry: progress and prospects

The work of the Centre Technique Forestier Tropical in French-speaking Africa

The tropical forests are an important renewable resource, an irreplaceable genetic pool that will continue to be a source of supply of many products (including firewood, the source of 58% of Africa's energy) if properly managed. They provide watershed, erosion and siltation protection, they ensure the continuing viability of any land developments in the valleys, they affect the climate and they have great leisure and tourism potential. Timber production is an essential resource in some countries.



Louis Huguet

In the developing countries, the demand for products (firewood) and land (to farm, particularly in forest areas) is such that, in many regions, the natural balance is likely to be upset. So it is not surprising that an attempt is being made to improve forest management and ensure that this natural resource continues to be replaced.

In one of its recommendations, the 17th congress of the International Union of Forest Research Organizations (IUFRO) in Kyoto, Japan, in 1981 placed particular emphasis on giving priority to forestry research in the developing countries.

The World Bank, the FAO and the IUFRO have looked into research requirements over the coming years and concluded that a boost should be given to schemes concerned with:

- the role of forestry in rural development and protecting trees and forests (development of growing methods, catchment areas);
- the production and use of energy, particularly increasing the production of biomass per hectare in the shortest time and making more efficient use of wood;
- better protection for and better development of tropical forest ecosystems.

This refers to what might be called the biological side of forestry, which is mainly carried out in the forest itself and is part of the research programme of our forest research directorate.

The CTFT is also investigating the technology of forestry products (timber, firewood, cellulose and paper), together with their characteristics, use and preservation. These studies are all being done under one directorate (wood research).

In the French-speaking countries of West Africa, the CTFT backs up national research bodies and develops the relevant programmes. The problems of research into forests and planting differ in the humid and the dry parts of tropical Africa.

In humid areas, a desire to ensure the permanency of the timber resources that are so important to the economy of some countries means that a considerable effort has to be put into research.

In dry areas, the domestic fuel and the usage (lumber, forage, fruit) aspects of the question tend to dominate.

Research into forests

Humid tropical areas

Study of the environment, productivity and regeneration of tropical rain forests. A big effort has been made to get a better idea of the available potential by making national forest inventories (25 million ha in French-speaking Africa have been covered).

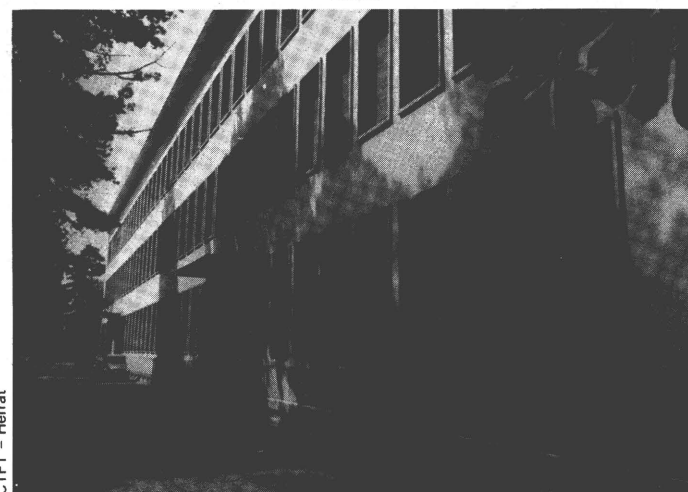
Our knowledge of stand dynamics is very fragmentary and we tend not to understand how trees grow, either singly or in forest communities.

The study of the possibilities of regenerating the natural forest is still in its infancy. The same goes for determining tree growth in different extensive forestry methods. The natural forest is being exploited and there should be rules for that exploitation so that the permanency of resources can be ensured. For some years now, research, tied up with work being done in Asia and tropical America, has been going on in the Ivory Coast and the Central African Republic.

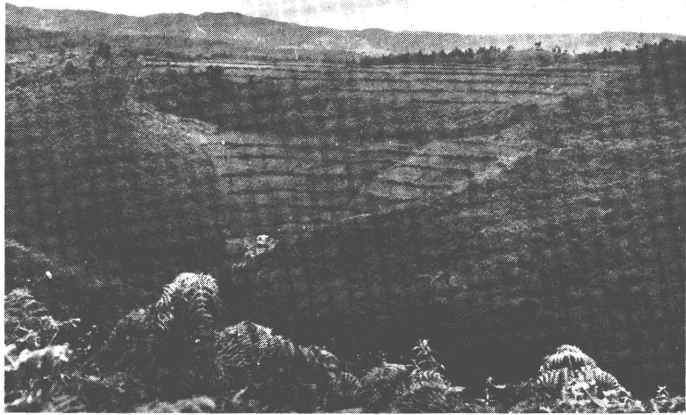
Our study of the effect of changes in the forest ecosystem on the environment (a MAB I programme) includes research of various kinds, particularly in the Ivory Coast. A multidisciplinary scheme aimed at improving our knowledge of the effect of replacing original ecosystems by simplified ones is being run in the tropical rain forests of Guyana. Data on hydrological and erosion parameters in different situations will be particularly useful guides for research in tropical Africa.

This work on understanding and controlling ecosystems, trees, stand dynamics, extensive silviculture, methods of exploitation that minimize soil erosion and products other

The CTFT building and laboratories in Nogent sur Marne, France



CTFT - Herrat



CTFT - de Vergette

The CTFT has carried out some major soil-conservation schemes in the rainy tropics, such as at Perinet in Madagascar (photo), where a system of hillside protection is combined with improved rice-growing and forest regeneration

than wood (pharmaceuticals, etc.) has to be continued and expended in the future.

Study of long- and medium-term rotation species in tropical rain forests. Work here has mainly been on the possibilities of artificially regenerating some useful species with a view to reforestation, or improving areas already under exploitation.

Some of the results obtained with species such as okume, terminalia and teak have proved notably positive.

The cost of plantations in rain forests is high and the length of the productive cycles is a handicap it would be wrong to overlook, but improvements to the quality of the trees could shorten the cycle and yield better products.

A lot of work has been done in the Ivory Coast and the Congo on the development and conservation of the genetic resources of the *terminalia* group of trees. A method of reproducing a certain number of selected clones of this species has been perfected and will soon be able to be used industrially, constituting the first stage in an improvement strategy.

In the coming years, this should be carried over to other species and attention should be given to ways of introducing trees into production systems. Methods associating trees and agriculture are already in use.

Study of the main fast-growing species in humid tropical areas. Research in this field is of great importance, the needs being considerable because of the priority most countries put on the problems of planting timber either as a raw material or to provide energy, which is of increasing interest.

Research also covers the techniques of plant preparation and stand installation and management.

The quality of the trees used for these artificial plantations is of capital importance, which is why an effort has been made with genetic improvements, particularly to eucalyptus trees and tropical pines.

Controlled pollination of eucalyptus trees has led to the production of hybrids, some of which are particularly good. A method of grafting whereby individuals identical to an original can be reproduced on an industrial scale was perfected in the Congo some years ago and, as it enables top-quality plants to be produced in a very short time, it has meant that plantations of high-yield, high-quality eucalyptus clonal hy-

brids have been able to be set up in the savanna areas along the Congo coast.

The trees still have to be improved and an attempt also has to be made with forestry methods proper (i.e. techniques of installation and site/production relations). The extension of these clone plantations with a view to the large-scale production of biomass with a short rotation period requires research into physiology (linked to improvements to stock), maintenance of soil fertility and the protection of plant health.

Work on introducing trees into rural and farm development should also be continued. This means all the schemes aimed at associating trees and agriculture, particularly in high-density population countries.

Dry tropical areas

In dry parts of the tropics (essentially savanna forest ecosystems) the forests make an even bigger contribution to protecting and maintaining the environmental balance. In these areas, wood is the main source of energy and the demand for it often leads to overexploitation.

Research here is along two main lines.

Study of the environment and the productivity of natural forests in dry areas. Our knowledge of the productivity of natural forests is still incomplete (the accepted figures go from 0.1 m³/ha/year on bushy slopes to 1.0 m³/ha/year in dense wooded savanna) and we still do not fully understand the possibilities of developing these natural forests to push up productivity.

It is worth noting that the effectiveness of developments of this kind will depend on the support of the local people.

More work is called for in this field, because an estimated 25% increase in the productivity of the forests in accessible areas in the CILSS countries would give an extra 2 million m³ of firewood every year.

Possibilities of reforestation in dry areas and integrating trees into the rural environment. Research into the techniques of reforestation in dry areas has been going on in all the dry countries in Africa for some years now. Most of the work has been on the relations between soil and growth and on productivity and the rate of exploitation. Alongside this, a great effort has been made with the quality of the trees and, although a certain number of interesting species have been selected, work still has to be continued and expanded if higher-yield trees are to be available.

Forests are sometimes irrigated to produce timber, but more has to be done with water efficiency and the attendant forestry techniques.

Rural forestry, i.e. integrating the tree into the agricultural environment (simultaneous or successive crops of trees and agricultural plants with wind breaks and bands of shelter) benefits from research in other areas of forestry, although specific adaptation is necessary.

The study of forage trees and species useful for other products than timber should also be pursued and expanded in view of the very great importance of such products to the ecological, nutritional and economic life of the communities concerned.

Research into wood

The CFTC's research into wood is along two lines: into timber in general, with a view to improving basic knowledge; and, more specifically, into tropical woods, with a view to using them both in the countries and climates in

which they are grown and in French industry where, because of their technological characteristics, they are not in direct competition with metropolitan species. Obviously, particular attention is given to tropical and French species grown in Guyana.

The CTFT wood research directorate comprises six divisions, whose research activities and involvement in the technical studies office it organizes, coordinates and supervises. The main activities of these divisions at the moment are outlined below.

The anatomy division

The basic idea here is to understand the structure (i.e. the cellular make-up) of tropical woods with a view to:

— Comparing structures and thereby defining the characteristics by which different species can be identified. This means constantly increasing and studying a reference collection of about 7000 species. Card index systems and publications enable:

i) woods submitted for study to the CTFT to be identified;
 ii) the identify of woods about which negotiators and users are doubtful to be determined (about 500 requests received every year).

— Determining the structural variations linked to growth rate, thereby defining the possibility, in the case of certain important forest species, of estimating the age or rate of growth from a cross-section of trunk. Large-scale applications with a view to developing and selecting better trees have already been made with okume, sipo and limba.

Intensive planting at Niangon and (right) a four year old teak stand at Déoumi, both in the Ivory Coast; selective cloning of these species has also been carried out in the Congo



— Lastly, studying the links between the anatomy of wood, residual growth tensions and physical, mechanical and paper-making properties.

Technology divisions (testing and use of wood, physical and mechanical properties)

These two divisions have a number of things in common and it is worth pointing them out before going on to the individual work of each.

— They both aim to facilitate the use of tropical wood (as timber or derivatives) through a better understanding of its physical and mechanical qualities and of the technologies of processing and use.

This means they both carry out physical and mechanical testing, and that there are much closer links between them than any other divisions. In particular, they make considerable use of common means (staff and equipment).

— They both provide experts, in Europe and the tropics, for public organizations and private companies involved in the industrial processing of wood, the identification of quality and the use of timber.

The testing and use division

This division is a good contact for producers and users of tropical wood, and for national and international public and professional bodies (CSTM, AFNOR, ISO, etc.), which means it has to provide a lot of information as regards the use of wood in general. Once it has identified the nature of the problem, it has to guide the applicant to the relevant specialized division. And it also has to see that any recommendations about wood use do not need altering in the light of problems that crop up with exploitation, processing, identification, preservation, reaction to chemicals and so on.

Its specialist knowledge of wood use is based on 64 years of testing and physical and mechanical research. It has to build on its achievements by applying CTFT tests to new and inadequately known species, and by looking into particular problems (the improved glueing and reconstituting of solid timber is currently under investigation).

The promotion of new uses is one of the main concerns of this division and it has the means of preparing (i.e. rough hewing, machine finishing, glueing and varnishing or painting) and testing samples of new products, of getting a variety of people to use them and of monitoring their behaviour.

It also runs tropical wood promotion campaigns, acting as a link between producers and users and getting the message across, in particular, in information seminars on the use of wood.

Basic and further training is provided in the tropics and at Noget in France, where the division runs collective and sometimes individual courses in wood classification, drying, glueing and so on. It also pilots technical data sheets on tropical woods.

The physical and mechanical properties division

The main job of this division is to meet any new needs revealed by changes in tropical wood supply and trends in technologies of processing and use.

— In some case, there are no standard methods of qualification and they have to be created. Most of the processing-potential tests come under this heading.

— In other cases, the information yielded is not in line with the new needs of the engineers. One example of this is the impossibility of extracting an acceptable rheological model.



Cloned eucalyptus hybridés, a last-growing species developed for humid tropical areas: foreground, a five year old stand; background, 17 months growth

— Lastly, there are cases where the yield of these methods (expressed as a ratio between the quality of the information supplied and the overall cost of obtaining it, is ridiculously low if it is compared to the performance of current electronic and microelectronic facilities.

The division's first job is, therefore, to come up with new tests for the technology divisions at Nogent and overseas. They must be more informative than the old ones and use all the new possibilities provided by developments in electronics (measurement) and microelectronics (acquisition and processing).

The division used to concentrate on developing methods of research into sawing, peeling and machine finishing, but its present research topics are:

- the distribution of growth constraints and the use of the knowledge of this distribution to improve the felling, transportation and processing of logs;
- the relation between growth constraints and the physical and mechanical properties of wood, principally in relation to drying and any resultant warping;
- a study of a rheological model for wood;
- devising a non-destructive or only slightly damaging method of identifying the quality of wood from plantations, with particular reference to the relation between density and quality.

The preservation division

There are three main areas of activity here—research proper, conventional experiments and testing for outside concerns (CTFT commitments, standardization, relations with the various areas of the profession—carpentry, panelling, etc.—and activity in international organizations such as IUFRO, IRG/WP, CEN and EHC).

Research. At the moment, basic research is into:

- the dynamics of the biodeterioration of wood by micro-organisms in a variety of situations, bearing in mind the durability and/or processes of preservation. The aim here is to chart the various types of colonization and degradation of wood linked to the development of wood microflora;
- developing a direct method of testing the rot resistance of finished products and of the value and reliability of any preservation process;
- the correlation between natural durability, chemical composition (extract content) and individual and intraspecific physical properties;
- a study of the variability of natural durability and impregnability;



A year-old eucalyptus urophylla plantation in dense forest (Ivory Coast)

— new methods which will give a better indication of how well given products can be preserved.

Conventional testing. The aim here is to increase our knowledge of rare or unknown species by well-trying, conventional methods (in the field, at sea and in the laboratory). It should also be noted that these tests are gradually giving way to basic research in a process which tends to put the emphasis on explaining the findings, which are often the subject of routine testing.

Work and testing carried out at external request. This is a fairly large part of the division's work and it should, with the perfecting of new methods of experimentation, develop over the coming years. The laboratories currently run:

- biological tests on preservation products and processes;
- anti-termite tests on a variety of woods;
- tests on plywood and chipboard panels;
- tests on the impregnability of wood.

They are also often consulted by professionals with preservation problems and they offer expert advice, etc.

The cellulose/chemicals division

The pulp and paper department:

- adapts conventional pulping techniques where heterogeneous mixtures of wood from the natural forest are being used (traditional chemical, semi-chemical and mechanical pulp, new types of pulp, bleaching, etc.);
- studies and selects products of reforestation for the pulp and paper industry (comparison of species, variability of characteristics, clonal selection, etc.);
- researches into wood as a material (correlation between the properties of wood and pulp or paper, the spatial variability of the paper characteristics in the tree).

The wood/energy department:

- deals with charring (properties and possible use of charcoal made from tropical species);
- investigates catalytic pyrolysis under pressure (study of the reactions of the conversion of wood into liquid fuel, analysis of the products obtained—this study is being run in conjunction with the University of Nancy);
- determines the specific characteristics of wood in the field of energy (burning point, amount of ash, fusibility of ash, etc.);
- monitors technical and scientific progress with gasification, combustion, etc.;
- deals with methanol synthesis (involvement in the work of a special body set up with a view to creating industrial units).

The wood chemistry department :

- analyses standard chemical components of wood (lignin, cellulose, pentosan, hexosan, extracts, ash, etc.);
- runs specific studies, e.g. into the resistance to acid discoloration of wood;
- investigates silica dosage;
- in conjunction with laboratories working on special problems, investigates the toxicity of wood and seeks special components (tannin, perfume, etc.).

The biometrics division

The most important job of this division is to back up the work of both the divisions at headquarters and the expatriate teams by participating in the setting up and running of studies, experiments and surveys and by supplying the means of processing the results of all this work.

Division personnel have to be conversant with mathematical, statistical and information techniques, be in constant contact with the other services and help train staff in data



CTFT - Civate

Plantation of anogeissus, a local species, in a dry area of Nigeria. Fast-growing species can counter the over-exploitation of tree cover in dry lands and help stabilize and maintain ecological conditions

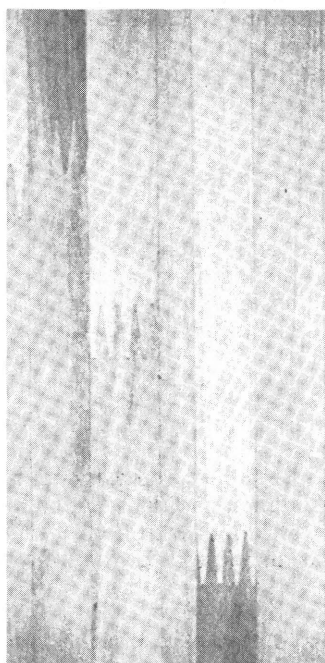
collection and analysis. They have to be in close contact with the university and the research centres, particularly INRA.

This division therefore provides a service, carries out research and offers encouragement. It is often at the crossroads of the activity of several teams and one of its main, permanent tasks is to bring out common concerns and subjects of reflexion as topics for its own research into biometrics.

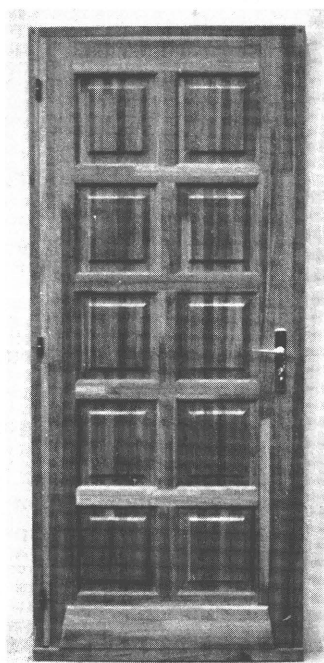
The division uses an external computer centre (CISI) and has its own mini-computer which mainly deals with scientific problems. The division is not yet able to handle all its own computing needs (archives, processing of administrative data, documentation and accounts) and the long-term answer is probably to set up an independent informatics service which, without robbing the division of its means, could certainly take over all the jobs that are in fact outside its scope. ○



Destroyed forest is being replanted in the Ivory Coast, as in other ACP countries, but not as fast as it is disappearing. Here, a samba plantation



CTFT - Civate



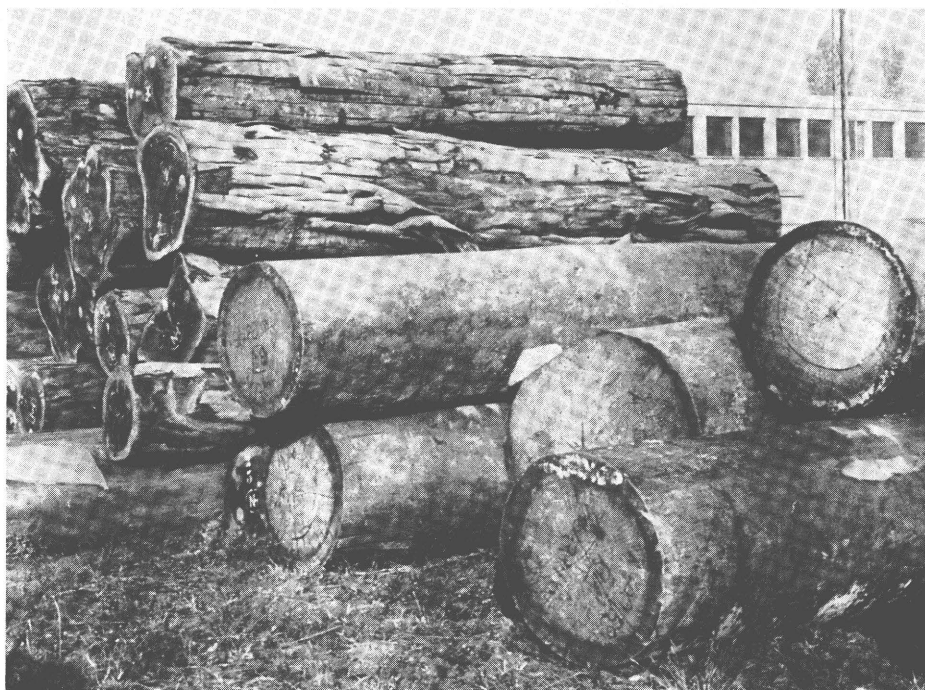
CTFT research into the physical and mechanical properties of different kinds of timber helps identify the best species for particular uses

Tropical hardwood supply and its use in Europe

by J. BRAZIER (*)



Tropical hardwood logs are imported in large quantities by some countries for plywood. Logs, seen here at an Italian ply-mill, are used for general purpose peeling (foreground) and decorative veneer (behind)



BRE PHOTOGRAPHY

Western Europe was, for many years, the main commercial market for tropical hardwood. For the first half of the 20th century this trade was largely with West Africa, though some timber was shipped from Malaya and Borneo; and teak, at first from Burma and later Thailand, was an important though limited trade. Today, the situation has changed; the volume of tropical wood imported by the EEC countries is well under half that shipped to Japan, and tropical hardwood use by countries such as Korea and Taiwan for a while neared that of Western Europe.

However, there is an important difference between the European and east Asian trades. The imports to Europe are almost equally divided between logs and sawn wood (that is, wood sawn in the country of origin), whereas those to the industrial countries of east Asia are almost entirely of logs. It is an important distinction because, as producing countries impose more stringent controls on the export of logs (Indonesia with a log export of 20 million m³ in 1979 sought to reduce this to 6 million m³ in 1981), the established pattern of trade must change.

All the European Community countries import wood in either modest or large quantities. Among the major users, Italy has the largest imports of wood of all kinds (almost 10 million m³ in 1979), followed by the United Kingdom, the Federal Republic of Germany, France and the Netherlands, with approximately 4 million m³. These imports comprise both softwoods, from the mainly northern hemisphere coniferous forests, and hardwoods from the temperate and tropical regions of the world.

Importing countries differ markedly in their use of different types of timber; thus the United Kingdom imports are about 80% sawn softwood and softwood is the major timber import to Germany and the Netherlands. The imports to both France and Italy are approximately half hardwood and half softwood, but the total volume of the Italian hardwood imports, about 4 million m³, is considerably greater than that of France, at about 2.5 million m³. However, about 80% of the French hardwood

imports come from tropical countries, compared with about 40% in the case of Italy.

There is a further difference between the European countries in the contribution of logs and sawnwood to their imports. Thus the United Kingdom, the Netherlands and Belgium have mainly sawnwood imports whereas France and Italy, though their imports of sawnwood are increasing, continue a large import of logs to sustain sawmilling and plymilling industries. This difference is seen again in a comparison of plywood imports as a proportion of plywood use. Imports account for 98% of total plywood use in the United Kingdom, 90% in the Netherlands and 80% in Belgium, with from a quarter to a third of these imports coming from developing countries, mainly those of south-east Asia. In contrast, tropical plywood imports to France, Italy and Germany are small, only a few per cent of their total use; this is met to a considerable extent (about 45% in the case of Germany, 60% in France and almost 80% in Italy) by a home plymilling industry, heavily dependent on tropical logs.

What countries supply Europe's tropical hardwood? Trade in tropical hardwood became firmly established with the need for reconstruction in Europe after World War II. At the time, it was dominated by supply from West Africa, but by the mid-'60s south-east Asia was making an increasing contribution, at first to Japan, but more recently to countries around the world. Today, more than 70% of the international trade in tropical hardwood comes from Malaysia, Indonesia and the Philippines. This change has affected the European market, most notably in those countries with significant sawnwood imports—the United Kingdom, the Nether-

(*) Princes Risborough Laboratory, Building Research Establishment, United Kingdom.

The influence of the established trading patterns

A general requirement throughout Western Europe is for red woods, used for furniture and high class joinery. Though choice of furniture woods is influenced, in some measure, by fashion, there is a steady demand for mahogany (*Khaya* spp) and sapele (*Entandrophragma cylindricum*), both from West Africa. In France, in particular, there is a traditional use of hardwoods for joinery; in the Netherlands and the United Kingdom this use has been met mainly by softwoods, though with an increasing interest, in both countries, in hardwoods. Sipo (*Entandrophragma utile*) from West Africa has been popular for joinery and other purposes where a mahogany-like wood with a good natural durability is needed: however, diminishing supply and rising cost have led to interest in other red woods, notably dark red meranti from Malaysia and red lauan from the Philippines, which have been widely used in the Netherlands, Belgium, France and the United Kingdom.

A very fine mahogany (*Swietenia* species) from Brazil and elsewhere in Latin America has found favour, particularly in the United Kingdom, for joinery and other purposes. Teak (*Tectona grandis*), mainly from Burma, maintains a modest market for demanding uses out of doors and, for a while, for furniture, mainly as veneer. Other structural woods include iroko (*Chlorophora excelsa*), shipped mainly from the Ivory Coast to most European countries, and keruing (*Dipterocarpus* species) from Malaysia, popular in the United Kingdom because of its low cost and good sizes. Of special interest is the use of timber for heavy structural work, including dock, harbour and shore protection work. The selection is influenced by established trading patterns; thus the United Kingdom tends to use greenheart (*Ocotea rodiaei*) from Guyana, though with an increasing interest in balau (*Shorea* species) from Malaysia; France uses azobé (*Lophira alata*), mainly from Cameroon, and the Netherlands basralocus (*Dicorynia guianensis*) from Suriname (though there too, other timbers, notably azobé, are used).

“The forest is under great pressure”

Finally, what of the future? Fears are expressed about the continued existence of the tropical forest resource. This concern is well-founded, though not so much because of its use for timber but because of its destruction for what is often short-term farming. All must be concerned at its loss. The tropical forest is, first and foremost, a resource for the benefit of those in the land where it is. Developed nations have no special right to its timber for their industrial needs, though its export is often an important source of income for many developing countries. However, often more importantly for many developing countries, the forest is a source of fuel, with as much as 90% of the timber cut used for this purpose. Thus the forest is under great pressure.

There are ways in which this might be eased. When it is cut, it can be used more effectively by removing more of those trees which are felled, and by commercial acceptance of timbers which are at present unused and which, if left, may well be killed or burnt; extending the number of timbers used is a matter for technical research and cooperation between the producing and user nations. Quite as important, though, is attention to the effective management of the resource and to the creation of new forests to reduce the commercial pressures on the natural resource. The potential for timber growth in many warm countries is very great and yet it is only barely being tapped. Given investment for this, there is no reason why the consumer, whether in West-Europe or elsewhere, should be without wood. However, and this is a major change under way, the consumer in Europe will increasingly receive his wood as processed ma-



BRE Photography

Tropical timber from some countries is supplied in sawn form. Brazilian mahogany is here being inspected in a Dutch importer's yard

lands, Germany, Belgium, etc. By 1979, the sawnwood exports from Malaysia, Singapore, Indonesia and the Philippines to European Community countries exceeded 2.3 million m³ out of total sawn tropical hardwood imports estimated at about 3 million m³. Africa continues as the main source of supply of tropical hardwood logs to Europe, most notably from the Ivory Coast, Gabon, Cameroon and Liberia; Nigeria, once an important country of supply, no longer exports timber, and Ghana has a ban on log exports of its primary hardwoods though it continues to ship sawnwood. The West African log trade, which in 1979 amounted to 6 million m³, is mostly with Italy and France, though substantial volumes also go to Germany and Spain. In comparison, African sawnwood exports, at a little under 700 000 m³ in 1979, are on a modest scale. They come mainly from the Ivory Coast and Cameroon, with smaller quantities from Ghana and Liberia, and are shipped principally to France, the United Kingdom and Germany. The only other tropical source of note is Latin America; as yet, supply is at a fairly low level with shipments of sawnwood, mainly from Brazil.

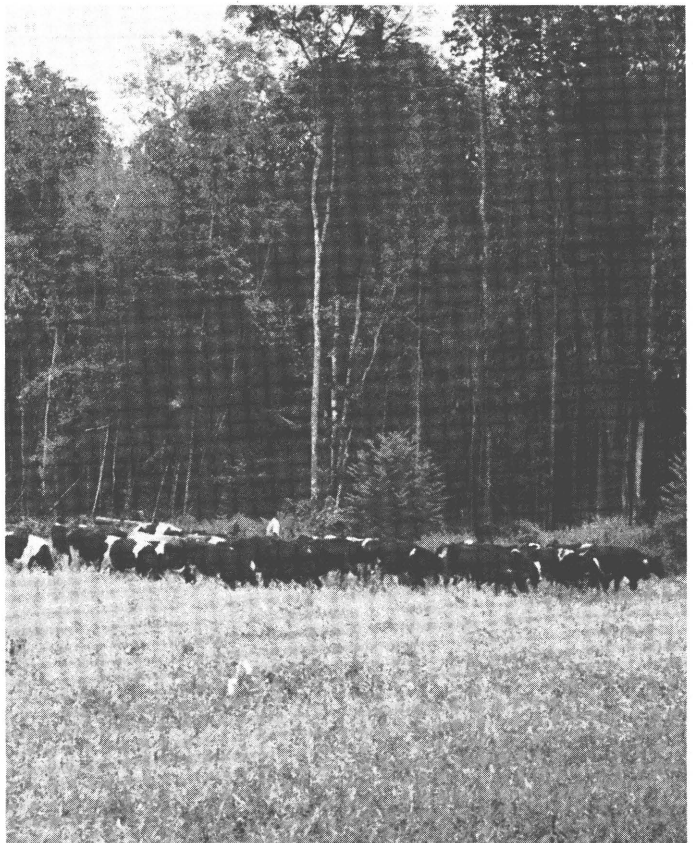
What woods are used? Remarkably, though probably well over 100 are shipped, use in each of the importing countries tends to be concentrated on a few, with perhaps 70% of the hardwood used met by not more than 10 timbers. There are national differences, with countries such as France and Italy maintaining a plywood industry having a large log import of lightweight woods, most notably okoumé (*Aucoumea klaineana*) from Gabon and samba (*Triplochiton scleroxylon*) from the Ivory Coast. Aniégré (*Aningeria* spp), an important export timber from the Ivory Coast, is peeled to give veneer, often used as a base for decorative printed surfaces.



Tropical hardwood is often used for high-class joinery, as in these entrance doors to a public building

material and components rather than as raw timber. The days of the log trade must be numbered. ○ J.B.

Acknowledgement: most of the statistical data are from the *FAO Yearbook of Forest Products* for 1979.



Wide-scale and extensive animal husbandry can be harmful to forest preservation (photo, in Guyana)

France, Europe and the tropical forest

France's agriculture ministry recently brought out a working paper called *France and the tropical forest* in which the authors, all policy-makers and scientists from the forestry sector, put the size of the tropical forest today at 1 800 million ha, 1 200 million ha of it dense forest and 600 m ha sparser growth.

The American continent has 42 % of this forest, Africa 37 % and Asia-Oceania 21 %. The ACP group has 60 % of the total, which makes its role and importance in the forestry economy very considerable. The group's importance is also reflected in the type of wood on the market, as hardwoods from the hot regions of the world have replaced conifers from the north, the figure for tropical woods sold in Europe, the USA and East Asia having risen from 2.6 million m³ in 1950 to 60 million m³ in 1978.

Africa was long the principal supplier of tropical woods, the report states, but its declining importance on the world market (largely due to substantial drops in production in Niger and the Ivory Coast following over-fast exploitation) has caused its output to stagnate over the past few years. However, other countries (Zaire, the Congo and Cameroon) are pushing up their sales, although it is east Asia that has become the world's biggest exporter of tropical wood (and, increasingly, of processed products instead of logs) over the past decade.

On the import side, Japan is in the lead, followed by the USA and Europe—although Europe, says the report, is only in an intermediate position as regards both the quantity of tropical wood consumed (19 million m³ in 1978) and the

nature of the goods imported (not just logs, but an increasing number of finished products).

France is in a special position, in that it is Europe's biggest importer of logs and sawn timber although it is in fact less dependent on foreign sources than other EEC member states (the UK, Germany and Italy). This is because of the considerable experience of using tropical wood in industry it has obtained through its colonial connexions. The dominance of tropical wood in the country's industry has made it possible to keep forestry imports intact and for France, more than other states, to develop the sort of wood technology and scientific research that can help the tropical countries. But in spite of this scientific progress, it is still not possible to cover the desert with trees (see article by CTFT director Louis Huguet).

The French agriculture ministry paper also suggests that there will be no shortage of tropical wood in even the fairly distant future. Some African countries, the Ivory Coast and Gabon (the coastal region) in particular, have over-exploited their forests; but, overall, the continent's reserves are still considerable. Nevertheless, if the tropical forests are ever exhausted, or if the currently very good prices and conditions of access to tropical timber change much, then Europe, and France in particular, is in a position to develop substitute products (beech, poplar and Douglas and other pines).

But France, unlike some industrialized countries, is not expecting this to happen. Instead, the French authorities' policy should be to develop the tropical forests which provide their regular supplies of raw materials, and to enable the producing countries in Africa and any other states wanting help with the relevant technology, to obtain a proper wood-processing economy and to lose no time in reconstituting the forests that have been destroyed. ○

The Congolese forest

A vast potential scarcely exploited⁽¹⁾

The increasing importance of oil production to the Congolese economy (2), and the new opportunities that the recent spin-off from this product has provided for the financing of much bigger development projects than before, could well lead to the country's other possibilities being overlooked. "Black gold" should not conceal what its forest can bring the Congo, with its policy of growth and export diversification and its drive to re-establish regional balance, in the medium and long terms.

Forest covers 60% of the Congo, about 20 million ha. Until 1972, forestry was the country's main resource. Yet in 1982 it has to be admitted that the Congolese forest still is more a vast potential resource than a productive, abundantly and rationally exploited reality.

The Congolese themselves say they only derive 20-25% of the potential benefit from their forest. In 1980, they produced 600 000 m³ of timber, for example, out of a possible 2 million m³ of known species. And exports were unequally spread across the regions, the coast now being practically devoid of okume and timba, while the Chaillu and Niari areas are being exploited to the full and the Massif du Nord, by far the most important area with 15 million ha, is still virtually intact.

The restricted and unevenly spread industry is largely dominated by private foreign, mixed (70%) concerns and exploitation has tended to involve intensive felling of the most profitable species in the most accessible areas. Only a small percentage of the logs are processed and the products are only first-stage processed for export (sawn timber, veneer, peeled wood and planks). Here the private foreign sector is even more preponderant and the only important product is peeled, veneer of which the Congo with 10% of the world market, is Africa's biggest producer. Processed products are exported freely, but there is a state monopoly (via the OCB, the Congolese timber board) on logs.

The crisis of 1974-75 and the resultant slump meant that the net state income from forestry products was low throughout the 1970s, although a slow recovery began in 1977.

However, the over-long stagnation of the market and the somewhat anarchic conventional approach to forestry were in contrast to the remarkable results of research in planting and reforestation. The techniques devised with the help of the CTFT, in particular with grafting fast-growing species (hybrid eucalyptus), make the Congo a world leader and mean it can diversify its aims and schemes involving artificial plantations in dense forest and savanna areas. UAIC, the Congo's industrial plantation unit, has obtained surprising results (40 m³ per ha per year from eucalyptus plots) and has trees likely to grow at a daily rate of 3-4 cm in the Pointe Noire area. This is with a view to meeting the demands of a paper pulp factory of 250 000 m³ p.a. capacity.



The difficulty of penetrating the dense African forests was long considered a handicap to the discovery of some parts of the continent. Now they are being opened up for rare kinds of timber, since wood is back in fashion as a building material and African forestry is big business. The Congolese forest is still largely intact, however, and with proper planning can be both exploited and safeguarded



(1) From the EEC delegation in the Congo.
 (2) 4 500 000 t forecast for 1982.

Outlook for the future

The Congolese authorities are very much aware that they are not capitalizing enough on their forestry potential or its immense possibilities. When the five-year (1981-86) plan was drawn up, they laid down a certain number of guidelines that would gradually give the timber industry the dynamism and coherence it has partly lacked so far.

The minister of the recently-created Ministry of Waterways and Forests (December 1980) has naturally been invited to give practical shape to these guidelines, which involve measures and programmes covering administrative and legal measures, research, exploitation, industry, marketing and planting.

The main aims in the long run are to do away with irrational exploitation, encourage the industrial processing of a growing percentage of logs and develop the scope of the Congolese forestry office (OCF) and the UAIC with a view to speeding up reforestation and planting schemes.

In addition to the measures to reorganize the profession, back up private national promoters, continue rationalizing the state sector, better define the role and intervention of the OCB and rewrite the forestry code, there are plans to:

- make a systematic inventory of little-known areas, particularly in the north (the Sangha, the Likouala and the Cuvette) so that the forestry potential is under much better control;
- create six forest complexes in the north, three in the Sangha and three in the Likouala;
- encourage the promotion of new species, in accordance with the recommendations of an international colloquium on tropical wood run (with technical and financial help from the Community) in Brazzaville last October.

It is to be hoped that the combination of these different programmes and measures will lead to the doubling of forestry production by 1986, as the table shows.

m ³	1980	1986
Logs	655 000	1 170 000
Sawn timber	79 000	203 000
Peeled veneer	90 500	126 900
Cut veneer	2 000	18 950

As far as reforestation and planting are concerned, it has been agreed, alongside this, that the plantations destined to supply the pulp mill at Pointe-Noire will be continued. Plantations for firewood and charcoal, particularly in the Brazzaville area, will be continued to supply energy for industry and the home.

These programmes should not just mean a substantial increase in production, turnover and added value in the timber industry. They should also create new jobs and considerably help re-establish the balance of the Congolese economy as a whole.

In 1980, the industry's turnover was about CFAF 20 000 m. It should go up to 40 000 m at the end of the five-year programme, if the new plantations in the north start producing as planned. The added value should settle at 16-18 000 m (not including the paper pulp project which will not start production until 1987) and 5000 new jobs should be created.

The forestry sector should, more generally, be of considerable importance for the Congo's development, not just because timber is an exportable national asset and therefore a source of foreign exchange, but also because it is an integral part of the industrial promotion of the whole country



EDF

Forests in Central Africa. The road that leads to the exploitation of the so-called jungle

and can help meet domestic demand, particularly for semi-finished wood and firewood. It should also generate important new sectors, such as the paper pulp industry, and increase potential exports and ensure that greater value is added to local products.

One of the main ambitions of the five-year plan is to get the national territory under control and here, forestry sector, particularly in the northern parts of the country, can make for the profitability of big ongoing and projected infrastructure schemes (roads in particular), put a brake on the drift to the towns and help the Congo, which currently tends to over-emphasize its southern region, to achieve a more satisfactory regional balance, both economically and demographically.

Lastly, by making the country less dependent on oil and its effects, it can help diversify and spread the load so that the economic future is easier to predict and less dependent on the outside world. What could be the Congo's "green gold" may be less attractive than "black gold" to begin with, because it is more difficult to capitalize on, but it has one advantage over oil. If forestry operations (for which the technology seems to be being acquired) can be run as planned, the forests will be a replaceable asset and, therefore, provide more stable support for development in the long term. o

The Ivorian forest in danger



The dense forests of the Ivory Coast, long one of the country's greatest assets, are disappearing. At the beginning of the century there were 15 million ha of trees, and still more than 9 million ha in 1966. Only 4 million ha were left in 1981.

Much of this rapid and accelerating decrease is caused by the considerable encroachment of agricultural land and it has to be realized that, as things are going, the exploitable forest could well disappear completely in 10 years if the right policy is not implemented.

The rapid decline of the forest raises two major problems:

— *An ecological problem.* The forest is a fundamental factor of equilibrium. It is an essential element of environmental protection because of its effect on ecology, climate, biology and the soil.

The Guinea-Congolese forest, which follows the Atlantic coast of Africa from Liberia to the mouth of the Congo, is a humidity belt for the ocean monsoon as it moves towards central Africa. The dry lands of the Sahel get their humidity and their water, in the rainy season, from the ocean and the thick coastal forests which extend the influence of the sea towards the centre of the continent. If these forests were to disappear, their regulating effect on water and rainfall would go and the effects on the climate would be irreversible.

— *An economic problem.* With 400 000 ha of forest being destroyed every year, the tree cover will soon be sparse and dotted about agricultural and uncultivated land. Any fair-sized forestry undertaking will be out of the question and the Ivory Coast's timber industry will no longer be able to develop for lack of raw materials.

Yet this sector is still one of the country's main activities, employing, so the development plan says, more than 40 000 people, distributing CFAF 30 000 million in wages and income and having a turnover of CFAF 150 000 m, 85 000 m of it from exports.



Forests are not only endangered in the Ivory Coast by logging and brush-fires

The timber economy

The English were the first to take an interest in the precious woods of the Assinia region east of Abidjan, in 1880. Bassam acajou, the most sought-after species, remained the country's main product until 1951.

In the beginning, only trees near the water-courses were felled, and floated downstream to the sea. Then, as these supplies were exhausted, trees in the interior were cut and the logs were hauled to the nearest river.

The industry developed slowly until 1957, when heavy demand from the industrialized countries led to more systematic prospection. Exploitation began in the south round the lagoons, moved centre-west in the 1960s and south-west after 1970. A pioneering front thus moved right across the forest; at the same time, the old sites in the south were searched for trees originally thought to be too small and for species previously overlooked.

Log production went up from 650 000 m³ in 1958 to more than 4 million m³ in 1969 and more than 5 million in 1973. Today, the forestry industry is concentrated in the west of the country (the south-west in particular) and, to a lesser extent, along the Ghanaian frontier.

The Ivorian forestry code, which dates from 1965, says that wood may not be cut without a temporary exploitation permit (usually issued for five years, renewable).

The permit-holder, who has to have the authorization of the Ministry of Waterways and Forests, has to undertake to:

- mark the logs and keep site records;
- provide facilities of general interest (roads, bridges, schools, etc.) on his concession or pay the corresponding amount in tax.

The government also took measures to encourage local processing and create added value (particularly in an economic situation which encouraged the export of logs to meet expanding demand from abroad).

A 1972 decree obliges exporters to deliver a volume of wood equal to the volume of their sales abroad to local processing plants, and this pushed up local processing from 24% to 41% between 1973 and 1978.

Since 1978, moreover, timber exporters have had to own processing plants before they can get government authorization.

In the Ivory Coast forestry concerns differ according to structure and degree of integration. The most important ones, economically, are the integrated firms which process wood locally in sawmills and factories and have their own marketing and export services. These are mainly foreign companies and they account for the major part of production.

National production ('000 m ³)						
	1975	1976	1977	1978	1979	1980
Exports	2 419	3 275	3 335	2 707	3 199	3 064
Deliveries to local factories	1 541	1 821	1 986	1 873	1 758	1 905
Total	3 960	5 096	5 321	4 580	4 957	4 969

(source: Ministry of Waterways & Forests)



After felling, transport by lorry...

Alongside these big firms are a certain number of family concerns, many of them dating from the first half of the century. Those that have survived have done so by adapting to industrialization, but most of them have been swallowed up by the big firms.

Last but not least, and the most numerous, are those individuals who, lacking means and ability of their own, tend to lease out their exploitation rights.

Timber production

Only 49 of the 300 main tropical species in the Ivorian forests are felled and marketed.

They include samba (about 20% of the total), followed by aniegre (8%), iroko, frame, silk-cotton and kotibe, the six species that account for 50% of the country's exports (1).

For the past 10 years, total timber production has been around 5 million m³.

In order to sustain this valuable asset, a wide-ranging campaign to promote new, hitherto neglected, species was launched in 1972, with the support of the European Commission and via the CICE, the Ivorian foreign trade centre.

This campaign was in two stages:

- research into the technological characteristics of the species to be promoted, with a view to industrial testing;
- active promotion with the production of technical data sheets and preservation of articles and models of products made from these species at specialized trade fairs.

Some products (iroko, kotibe, koto and faro) were very successful, in spite of the difficult situation in the timber sector.

As to the future, the five-year development plan proposes that wood production be kept down to 4 million m³ until

(1) Some species, such as sipo, acajou and assamela, which used to make up the bulk of exports, have decreased considerably.



... and the timber is floated down to the port of San Pedro. The names Africa, the Caribbean and the Pacific once conjured up a scene of forests and creepers: is that time vanishing?

1990, to safeguard the forests, although this will still mean that domestic demand (an estimated 1.9 million m³) can be met and a regular flow of processed and unprocessed wood can be maintained for export. But alongside this, log exports should be drastically reduced (to 1.5 million m³, or half the present volume, by 1985) to the benefit of local factories.

Industrial processing

Local processing has not developed in the same way as production. It increased considerably with the government's introduction of regulations in 1964-66, when the forestry code was drawn up, and again in 1973 when exporters began to have to supply local factories.

Today the industry consists of:

- a primary processing industry (sawing, peeling and veneering) comprising 78 firms;
- a secondary processing industry (timber for the building trade, industrial carpentry and furniture);
- a fairly important and diversified craft sector which employs about 7500 people.

Added value (craft not included) was as follows in 1980 (figures from the five-year plan):

<i>Primary processing</i>	71%
— sawing, peeling & veneering	(52.5)
— plywood, boards	(18.5)
<i>Secondary processing</i>	29%
— heavy construction materials:	
beams, houses and prefabs	(6.3%)
— light construction materials:	
flooring, moulding & panelling	(3.9%)
industrial carpentry	(6.5%)
furniture	(9.4%)
miscellaneous (crates, etc.)	(2.9%)



A sawmill in the Ivory Coast—if timber is to remain a renewable raw material, effective replanting policies must be applied in the ACP countries

There are a large number of economic and social advantages to wood processing. As well as capitalizing on a local raw material, this industry:

- employs tens of thousands of people;
- distributes around CFAF 10 000 million in wages;
- has a turnover of almost CFAF 50 000 million, 45 % of it from exports;
- is very decentralized, being spread throughout the forest zone, and thus helps prevent people moving to the towns;
- makes a contribution to protecting the forest.

Other economic aspects of the forest

Forestry has many effects on such important sectors as sea transport (timber accounts for one third of the freight exported through the port of Abidjan and 90 % through San Pedro), road transport (one third of the road haulage total is logs) and various branches of mechanics, repairs, construction and so on.

Furthermore, the forest:

- supplies the rural population with firewood;
- is a game reserve (20 000 of game consumed p.a.), and therefore a considerable supplier of protein;
- is a tourist attraction (particularly because of its animal life).

Destruction of the forest

The Ivory Coast's forests are disappearing for two very different reasons.

- Commercial forestry consumes almost 5 million m³ p.a. and tends to exhaust supplies of the most popular species.
- Clearance for agricultural purposes wastes or burns an estimated 13 million m³ p.a.

The average rate of tree cover (dense forests and park savanna) in the Ivory Coast was only 13 % in 1980, although the country had the finest forest in West Africa, covering 45 % of the territory, only 15 years ago. What is worse, in some areas (the south-east, the north-east and the centre), the figure has dropped below the 20 % mark which is considered critical as far as soil conservation and climatic stability are concerned.

The forest has been destroyed by piecemeal agricultural

development breaking up solid areas of trees. Deforestation first occurs along roads, mostly where the foresters haul out their logs. As agricultural pressure is very great in the naturally rich area where the trees grow, land clearance is common and the forest is eaten away almost everywhere at once. Each newcomer tries to go as far from existing farmers as possible, so as to leave room for expansion, and this contributes to breaking up the bulk of the forest.

Although traditional agriculture once left a large part of the forest cover, particularly the big trees which reduced soil erosion from rain and gave shade to prevent drying, modern machinery now means that everything can be cleared.

Land clearance to make way for agriculture immobilizes or destroys an estimated 13 million m³ every year—three times what the forestry industry fells. According to the development plan, itinerant agriculture wastes CFAF 325 million worth of forest every year!

Brush fires, a technique imported from the savanna lands in the north, also deteriorate the forest. Trees in dense forest, unlike savanna species, have a very low fire resistance and their destruction is final. The recolonization of areas abandoned by farmers is impossible when fallow fields are burnt every year, and they turn into poor savanna land with surface laterite formation.

Protection

The Ivory Coast government is aware of the importance of the problem and of all that the forest represents. The minister of waterways and forests, Christian Lohourignon Zagote, recently launched an appeal to save "the goose that lays the golden eggs" which has given the national economy so much so far.

The forest is an immediately exploitable asset. It is easy of access and for years it has been a source of considerable profit, which has been a basis for the development of the country as a whole. Today, after a century of intense exploitation, it must be protected.

With this in mind, various regulations have been introduced, including:

- the creation of a permanent 4.7 million ha forest domain where all forms of agriculture are banned;
- the maintenance of 2 million ha of forests as national parks/reserves;
- a formal ban on exporting certain species (iroko and kondroti) since December 1981;
- the expansion of the supervisory services and vocational training for officers of the waterways and forests department;
- the launching of integrated agricultural projects that include timber.

Alongside this, a considerable effort is being made with reforestation. This is something which actually started some time ago, as the first state reforestation schemes apparently began back in 1926.

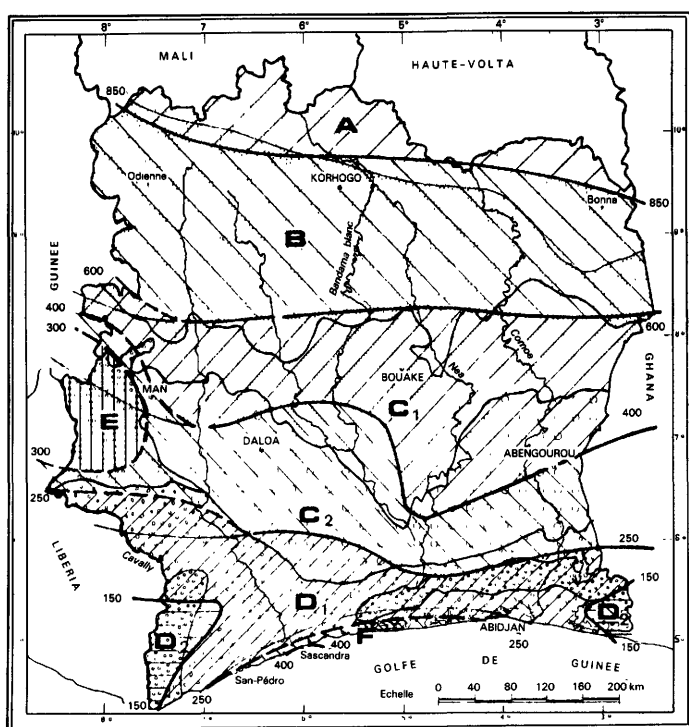
In the north, an estimated 20 000 ha have been planted, mostly with teak but with a considerable amount of cashew trees too.

In the dense forest areas, there has been a series of replanting experiments, with close planting in forests, cross rides and natural improvement. But it was not until 1966 that the CTFT really launched studies and prepared the work of Sodefoc, the forestry plantation development company set up in 1966.

In 1966-75, almost 23 000 ha were planted. Two methods were used—planting in thinned forests (medium-sized trees felled and big ones poisoned before new ones brought in) and planting on deforested, entirely cleared land. This

Rate of forest loss (1966-1977)

Forest inventory zone	Total area (ha)	Forest area		Annual loss (%)	Reforestation (%) 1966	Reforestation (%) 1977
		1966 (ha)	1967 (ha)			
North-west	2 132 000	746 000	615 000	1.6 %	35 %	28.8 %
South-west	2 582 000	1 960 000	1 700 000	1.2 %	75.9 %	65.8 %
Centre-north	3 612 400	2 039 000	490 000	6.9 %	56.5 %	13.6 %
Centre-south	1 730 000	1 209 000	849 000	2.7 %	69.9 %	49.0 %
North-east	3 060 000	1 373 000	240 000	7.5 %	44.8 %	7.8 %
South-east	2 554 900	1 652 000	290 000	7.5 %	64.6 %	11.4 %
Total	15 671 500	8 985 000	4 184 000	4.8 %	57.3 %	26.7 %



SUDAN ZONE

SUDANESE SECTOR

Savannah with shrubs, trees or thin forest

SUB-SUDANESE SECTOR

Savannah with shrubs, trees, lightly or densely forested, dry

Aggregate climatic water deficit isohume (mm)

Modification of initial line in accordance with natural vegetation

Climatic zone (aggregate climatic water deficit between 150 and 250 mm)

OMBROPHILE SECTOR

(dense evergreen rain forest)

Basic type has *Eremosphatha macrocarpa* and *diospyros manii*, can include *Turraeanthus africanus* and *Heisteria parvifolia*

Also *diospyros* spp and *Mapania* spp

Also *Uapaca esculenta*, *U. guineensis* and *Chidlowia sanguinea*, with *Tarrietia utilis* and *Chrysophyllum perpulchrum*

GUINEAN ZONE

MESOPHILE SECTOR

(dense, semi-deciduous rain forest)

Guinean savannah and forest with *Aubrevilles kerstingii* and *Khaya grandifolia*

Basic type has *Celtis* spp and *Triplochiton scleroxylon*, variations include *Nesogordonia paverifera* and *Khaya ivorensis*

State investments in reforestation

(CFAF million)

Pre 1977 : 4 130

1977 : 1 515

1978 : 2 300

1979 : 1 955

1980 : 2 554

1981 : 2 320

(forecasts)

1982 : 2 680

1983 : 3 040

1984 : 3 760

1985 : 3 600

second technique became the standard method of reforestation in 1976-80, when a further 13 000 ha were planted.

As to the future, the five-year plan provides for rapid acceleration of the reforestation programme to reach 10 000 ha p.a. More than CFAF 15 000 m will be channelled into this operation and there will also be savanna schemes for firewood (1 500 m) and natural development (3 000 m).

The tropical forest is a complex ecosystem. There are a limited number of very popular main species growing amidst a wide variety of other trees. They can be difficult or impossible to use; there are the obstacles of the extreme density of the trees and the creepers to contend with and so there are considerable problems when it comes to exploitation and reforestation.

Answers have still to be found to technical questions on land preparation (rapid soil erosion, take-over by resurgent forest and grasses) and genetic quality (origin, incomplete collections, stability of improvements). Lastly, it would be a good idea to produce natural forest development systems that are more economical and more practical than those in current use.

So an extra effort is called for with applied research so as to give us a better grasp of and better control over regeneration of the tropical forest.

In the long term, this type of research, still the poor relation in the forestry sector, is the only way of achieving a new method that will produce good quality, regular timber from a short cycle. Industrial production of this kind would indeed be the best way of saving the primary forest, which would otherwise disappear with the authenticity and fundamental heritage of a whole region of Africa in its wake. ○

Forestry in Guyana

by Balkaran UDIT (*)

Guyana (formerly British Guiana) lies between 1° and 8° north latitude on the north-east coast of South America. The present population is about 825 000, 95 % of whom live along a narrow coastal belt bordering the Atlantic Ocean.

The total land area of Guyana is 21 497 000 hectares (214 497 km²). Of this amount, 19 844 170 hectares are covered with natural forests. The estimated volume of marketable timber, comprising mixed tropical hardwoods, is about 1 million m³.

The forests

There are five major forest formations. These are:

Rain forest. This group occupies about one third of the total land area of the country. The terrain is mainly flat plain to broken country and rocky hills. The soils are brown sands, loams or red earths. The forest is dense and comprises mainly mixed species. The major species are *Eschweilera* (kakaralli), *Licania* (kautaballi), *Swartzia* (wamara), *Ocotea* (greenheart and kereti), *Mora* (morabukea), *Alexa* (haiariballi), *Peltogyne* (purpleheart), *Eperua* (wallaba) and *Manilkara* (bulletwood).

Seasonal forest. This group is found on well-drained sites with marked periods of wet and dry seasons. The soils are mainly light-coloured sands. The major species here are *Goupia* (kabukalli), *Loxopterygium* (hububalli), *Aspidasperma* (yaruru), *Catostemna* (baromalli).

Dry evergreen forest. This group occurs on the white sand peneplain. The major species are *Eperua* (wallaba) and *Dimorphandra* (dakama).

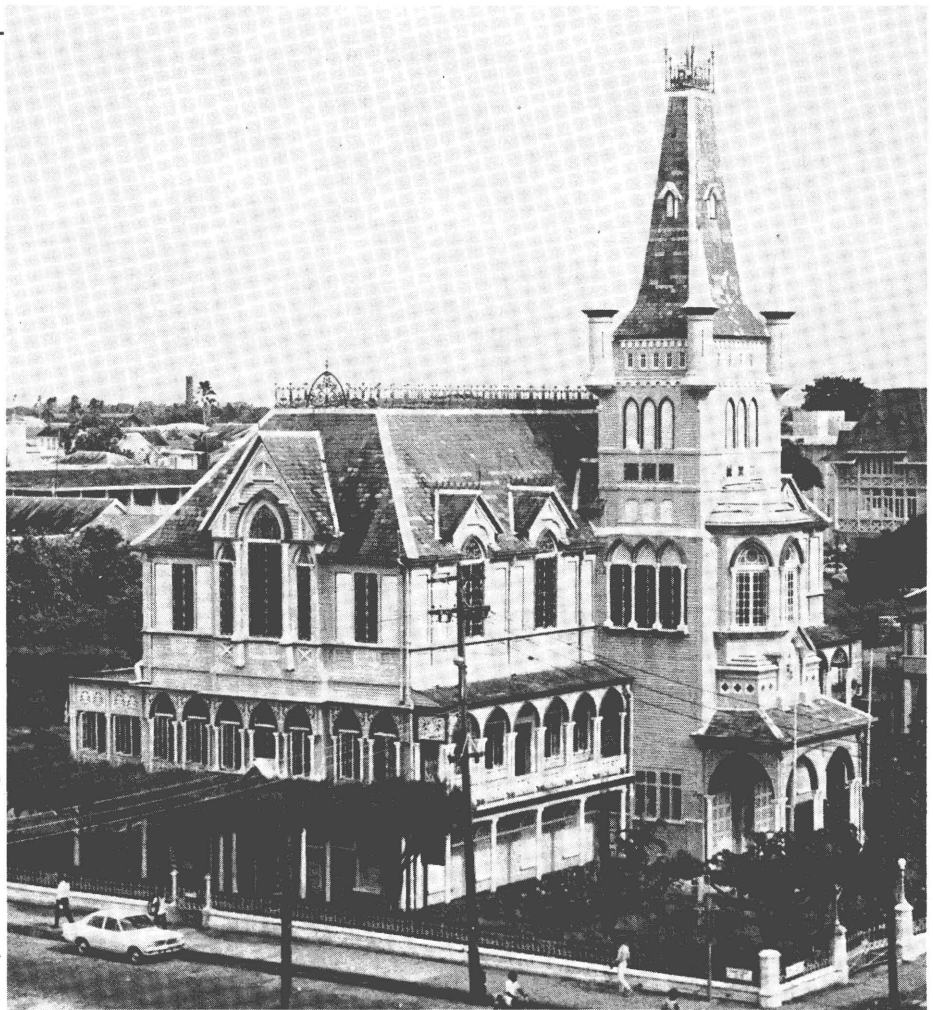
Swamp and marsh forest. This group occurs on the higher reaches of many creeks on Pegasse soils. The major species are *Symphonia* (manni), *Tabebuia* (white cedar), *Euterpe* (manicole), *Virola surinamenses* (dalli), *Carapa* (crabwood), *Pterocarpus* (corkwood), *Mora exelsa* (mora) and *Hunuria* (tauroniro).

Montane forest. This group is found in areas where conditions are peculiar to mountain ranges, e.g. lower temperature, lower humidity. It occurs on loams and red earths at high elevations. The major species here are those found in the rain forest and dry evergreen forest groups.

Logging practices

Logging in Guyana is extremely selective. Not only are the major commercial species highly graded, but there is selection within these species for specific bole and diameter measurements. In any given operation, only 15-20 % by volume of the forest cover is removed. This volume is removed

(*) A graduate in forestry from the University of New Brunswick (Canada) and assistant conservator of forests in Guyana.



Ministry of information - Georgetown (Guyana)

City Hall, Georgetown

The building is made entirely of wood. The use of wood for building and furnishing is very common in Guyana, and the government is promoting its development along with other local raw materials

from an area of about 7 000 hectares per year. Virtually all this production comes from an area that covers only 0.035 % of the total forested area of the country.

The use of heavy equipment in harvesting is not very popular. Only six companies use skidders and logging trucks. The system mostly used is felling by manual power-saws to tree length. Choker skidders are the only ones used. The trucks mostly used are the Canadian Mac trailer 2-wheel drive type. The most popular method is the use of power-saws and farm tractors equipped with hydraulic winches. The off-road transport is done by farm tractors and trailers. Logs are floated or placed on steel barges down river to the coast, where most of the sawmills are situated.

Production and export

Guyana's forest industry still operates on a traditional basis. The main forms of production are round logs and sawn timber. Greenheart, the most popular wood, accounts for about 50 % of production and 75 % of exports.

The present trend is to harvest and sell some of the lesser-known species for specific end-uses. In general, greenheart, kabukalli, mora, kakaralli and purpleheart are structural woods. For interior work, decorative and utility purposes, tauroniro, *Diptotropis purpurea* (tatabu), yaruru, crabwood, kereti and wamara are quite suitable. Baromalli, dalli, manni, *Pouteria speciosa* (suya) and *Tapiria* spp. (duka) are quite suitable for veneer and plywood.



Annual log production is about 0.15 million m³. Timber is exported in round, hewn, pole, post and shingle forms. Production and export are low when compared to the total volume of marketable timber, estimated at 1 million m³. Some of the reasons for such low production are:

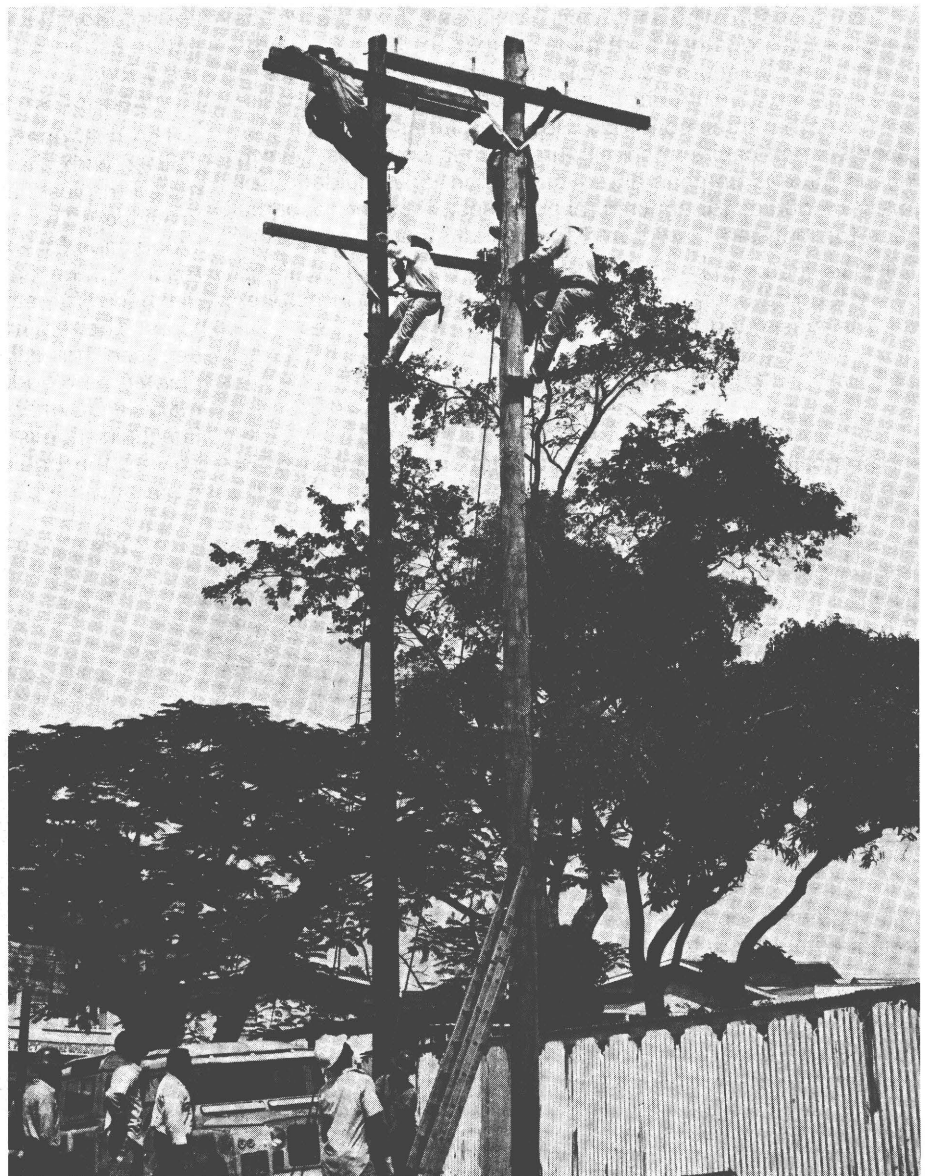
1. Only about 25% of this total volume is physically and economically accessible.
2. Market constraints—the local market is not expanding and on the foreign markets, lesser-known species are still to be promoted and accepted.
3. Lack of commitment on the part of private loggers to practise any form of scientific forestry—the traditional species are high-graded; no inputs in inventory or management plans; saw-milling practices are traditional; no environmental or silvicultural programmes are instituted.
4. Lack of adequate foreign exchange to replace or purchase new equipment.

The practice of any form of scientific forestry in Guyana is sadly lacking. The forests are administered by a central government agency, the Forestry Commission. This commission is supposed to allocate the resources, collect revenue and to initiate any form of forest management practices. However, there is a lack of finance and professional staff to institute any changes.

Forestry at present in Guyana holds a priority in the central government's development programme. It is hoped to embark on a larger scale of log production and to try to export more forest produce to bring in some badly needed foreign exchange. To this end, a silvicultural programme, which at present is negligible, wood research and an up-to-date inventory, will be started.

○ B.U.

The encroachment of farming on forestry: above, an example in Guyana. (Below) Wooden poles are used in the rural electrification programme, where they have proved cheaper and just as reliable as harder materials



The forests of Papua New Guinea

by Andrew M. D. YAUIEB^(*)

The timber resources of Papua New Guinea cover about 40 million ha (86 %) of the land; the total area, 46.5 million ha, breaks down as follows:

	Million ha
— Inaccessible forest (protection forest)	21.5
— Accessible (not suitable for development)	10.5
— Accessible (suitable for development)	8.5
— Other areas (swamps, grasslands, unproductive, forests, gardens, etc.)	6.0
	46.5 m

The majority of the presently accessible timber resources occur on the coastal plains. The forests consists of up to 200 commercial species, although only about 15 species are currently reasonably well known on the world markets.

In comparison with Indonesia, Malaysia and the Philippines, which together contribute almost 96 % of the hardwood trade in south-east Asia, Papua New Guinea has a lower operable volume both in toto, and on a hectare basis, than the other three countries. However, it has a much larger resource per capita than all three other countries, which means there is no general movement for early liquidation of forest resources for agricultural purposes. Thus the resource base for long-term integrated forest industries is secure.

These figures may well be now out of date, in view of the heavy logging operations carried out since 1975 in Indonesia, Malaysia and the Philippines.

Plantation establishment and management

Historically, the first forest plantations established in Papua New Guinea can be viewed as originally being single crop plantations for the production of sawlogs. The original plantings were at Keravat (West New Britain), Brown River (Central Province) and Bulolo (Morobe Province), and were planted as a replacement resource to the natural stands which were being logged.

Originally, none of the three major plantation areas was managed for anything except industrial forestry. However, cattle are now being grazed on a regular basis by the logging company under the *Araucaria* plantations at Bulolo, with considerable success.

In addition, demonstration areas are being established to show that undercropping of chillies and butterfly food vines can increase the production potential of the plantations. It is hoped that this will be undertaken by local people on small areas (approximately 0.1 hec-

tares) and will provide them with a reasonable income from sale of chillies and butterflies.

A second phase of plantation establishment came in the early to mid-1960s. There are vast areas of anthropogenic grasslands in the highlands of Papua New Guinea that were not being utilized. It was decided to determine if trees could be established, and if so, what species. The only successful genus was *Pinus*.

These areas were originally planted to demonstrate that trees would grow in grasslands, with the hope of encouraging wood lot plantings by individuals. At the time of planting the end use of the wood was not known and no processing facilities were available. However, wood lot plantings are now being made and, at present, because of an extreme shortage of sawn timber and post material in the area, all wood extracted is sold.

In addition, cattle are grazing the plantations in a further demonstration of increased land utilization. Individuals may run cattle on government plantations after paying an agistment fee, fencing the area and improving cattle fodder through the sowing of legumes.

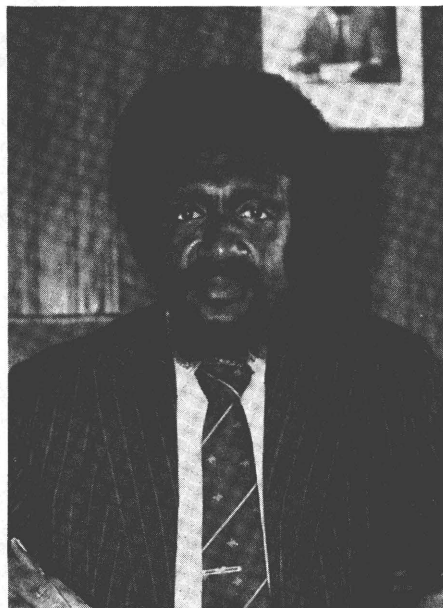
A third phase of plantation establishment started in the Western Highlands Province, where swamp land is being reclaimed by digging drains and planting eucalyptus. Trees are sold for fuel to tea factories, or for preservative impregnation as fence posts and poles. Major species are *Eucalyptus robusta*, *E. grandis* and *E. saligna*. Land reclaimed is intended for small-holder agriculture.

The final phase of forest management began in the early 1970s with the first large-scale clear felling operation of mixed tropical hardwood forest in the Gogol valley (Madang Province). The timber cut is either sawn or converted to woodchips for export to Japan. The total area involved will reach, in the first phase, approximately 65 000 hectares. Planned reforestation is expected to aggregate 25 000 hectares. The remaining land will revert to secondary regrowth, be used for subsistence or cash crop agriculture, or be planted as wood lots, depending on the desire of the customary landowners. Land use surveys were conducted, but final utilization is dependent upon these customary landowners, as the original rights negotiated between the government and the people included the extraction of timber only, with no land rights being held by the government. As such, each year's reforestation area involves new negotiations between the government and the landowners.

Logging in another large-scale reforestation programme following chip logging has started in West New Britain, while one other large-scale clear felling proposal in the West Sepik Province is presently being negotiated.

There are only 44 000 ha of state forests. There are no communal forests, except that virtually the whole of PNG could be classed as a communal forest, as the government regards all land as being owned by the people, by clan and village.

There are two significant private industrial forestry plantation ventures in PNG; one associated with woodchip logging in Madang—3 000 ha to 1982, and in New Britain, at present about 350 ha. In both cases kamarere (*Euc. deglupta*) is the predominant species planted.



Andrew M. D. Yaueib

(*) Director of forests.



Heavy vehicles allow the forest to be exploited. In the foreground, a log is being measured

The timber industry of Papua New Guinea

The timber industry in PNG has the potential to become one of the mainstays of the country's economy, in providing employment for an increasing workforce, as a major foreign exchange earner and as a significant source of revenue for the government.

There have been marked developments in the industry over the past 30 years. Exports of forest products have expanded from a value of A\$257 000 in 1951-52 to about K45 million in 1981 (1), which is approximately seven per cent of the total national export earnings. The major markets for these forest products are Japan (70%), South Korea (11%), Australia (10%), Taiwan (5%) and others 4%. Royalty collected from timber operations has risen from K208 000 in 1958-59 to about K300 000 in 1981.

At present, there are in operation about 72 sawmills, one plywood mill, three veneer mills and one woodchip mill. The wood processing industry is composed of 130 factories (sawmills, joineries, furniture factories, etc.). It employs some 4 000 people and it pays about K5 million per year in wages, with an investment of some K30 million in land, buildings and plant.

On the domestic front, the timber industry makes significant savings on imports of building materials: 58 000 cubic metres of sawn timber, 10 300 cubic metres of plywood, 1 300 cubic metres of prefabricated housing, 838 cubic metres of furniture and 536 cubic metres of treated poles were used locally in 1980, with a total value of approximately K15.3 million.

Sawmilling

This type of operation represents the major wood-using industry in PNG, there being only one plywood manufacturer, two veneer producers, one wood chip producer and no blockboard, wood panel etc. producers operating.

Commercial sawmills (i.e. aimed at supplying more than local village needs) vary from several nationally-owned co-operative mills cutting not much more than 3 000 m³ of logs/yr to large installations costing up to US\$4.5 million.

The latter must be oriented to export marketing of the product, but studies have shown this profitability to be very

(1) 1 Kina = A\$1.31, US\$1.40, ECU 1.36 (May 1982).



PNG timber is highly competitive with that of Africa and Asia on the international market

sensitive to overseas sawn prices, and in recent years (since the 1974 oil shock) there has been a notable lack of profitability in the sawmilling industry in general. As well, studies have shown that a significant segment of local market sales is necessary to dispose of the fall down from the usually higher quality demanded by overseas markets. It would appear that, in general, sawn timber importing countries produce a sufficiency of the lower grades in their own timber industries and wish only to import the higher grades. This leaves the problem of disposal of the lower grades in the exporting country on their local market.

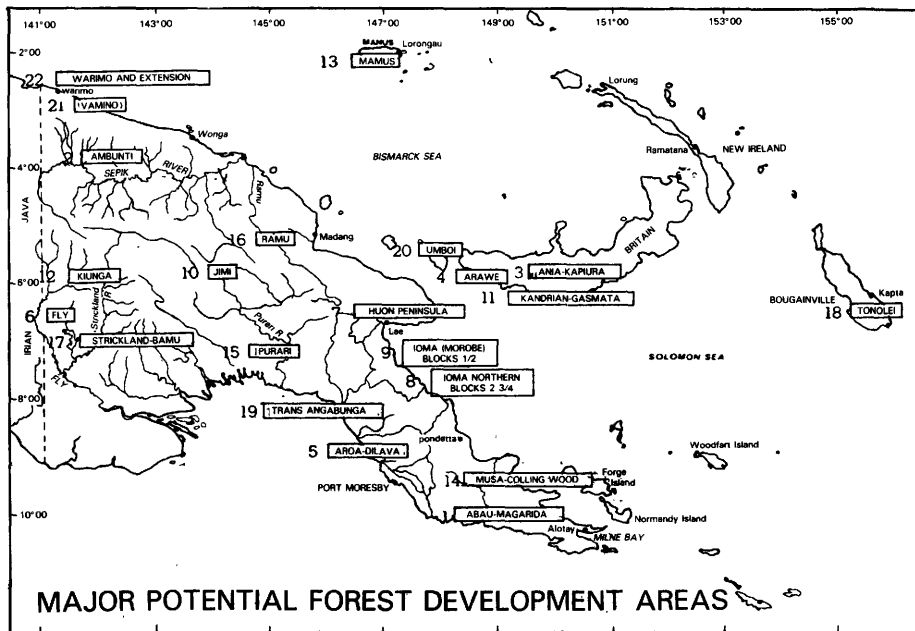
Costs of production vary enormously between individual companies. The major reasons for variation are:

- management shortfalls;
- lack of marketing know-how;
- variation in the quality of the resource and its product;
- size of loan repayments relative to the scale of operations.

The forest products of Papua New Guinea and their uses

Small sawmills. Costs of production in small sawmills, which are usually of the "mobile" type, are impossible to determine as many mission-operated mills do not pay standard wage rates, and/or logs may be supplied by timber owners whose only income in a year will be from logging, etc. and/or there may not be a profit motive active (in mission mills at least). Village mills may be operated for convenience only for the surrounding people, when necessary selling only that volume surplus to their own requirements at a price set by methods which can only be guessed at. There would be over 50 such mills scattered around the more remote parts of PNG.

The forests of Papua New Guinea contain a large variety

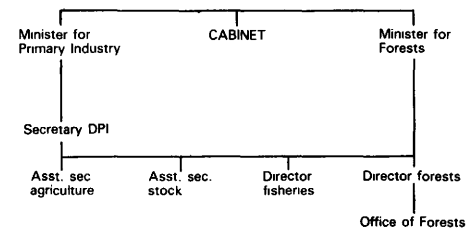


characteristics, and recommended end uses for individual timber species, is readily available.

The application of recognized timber preservatives to Papua New Guinea species has also been studied in some detail. A cheap dip-diffusion method of preserving non-durable hardwoods, for use away from the weather and out of contact with the ground, has been developed in conjunction with the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO). Pressure treatment schedules for Papua New Guinea timbers have also been developed for specific hazards.

Organization of forestry administration

Forestry administration is responsible to a minister in the cabinet but the Office of Forests (changed in 1974 from a Department of Forestry to half the Ministry of Natural Resources) now is regarded as a division of the Department of Primary Industry. i.e. the director of forests answers to his own minister for policy matters, but administratively is controlled (finance, personnel etc.) by the secretary for primary industry, as shown below:



of species of different characteristics, of which many are already acceptable for sawing or as veneer on international markets.

Despite the fact that the forests of Papua New Guinea carry a somewhat lower volume per hectare of commercial timber than do the forests in south-east Asian countries, the total timber resources of Papua New Guinea are quite substantial and of considerable commercial potential. Markets can be supplied from Papua New Guinea forests with eminently satisfactory alternatives to all the well-known south-east Asian and African species, with

equal or better application.

Papua New Guinea has many timber species, such as rosewood, walnut, taun, kwila and calophyllum, that are suitable for furniture, veneer and cabinet work; many others are suitable for rotary peeling, for fancy face veneers and also for core veneers. Speciality timbers of unique characteristics are available for virtually all known end uses.

A large store of information on PNG timbers and their uses is available in published form. Information on timber strength properties, preservation requirements, seasoning and machining

Forest resources

The following tables show the extent of the forest resources in Papua New Guinea when compared to its principal competitors in south-east Asia—Indonesia, Malaysia and the Philippines—which three countries together contribute almost 96% of the hardwood trade in south-east Asia. All three countries compete in the same export markets with Papua New Guinea.

TABLE 1. — Operable forest area

Country	Total (mill. of ha)	Percentage contribution	Per capita (ha)
Indonesia	42	48	0.3
Papua New Guinea	15	17	7.5
Malaysia	19	22	1.7
Philippines	11	13	0.3

TABLE 2. — Operable volume

Country	Total (mill. of m ³)	Percentage contribution of S.E. Asian timber	Per capita (m ³)
Indonesia	5 200	49	44
Papua New Guinea	1 480	13	627(1)
Malaysia	2 100	20	190
Philippines	1 888	18	50

(Source of both tables: FAO (1976) Forest resources in Asia far east region.)

(1) A major point of importance in the above tables is the extremely high PNG per capita figures compared to its south-east Asian competitors. This means there is no general movement for early liquidation of forest resources for land for agricultural purposes. The resources base for long term integrated forest industries is thus secure.

Forestry policy

The PNG parliament adopted a revised forest policy white paper in 1979. It related to the industrial side of forestry. In general it relaxed log export restrictions, eased processing requirements and opted for a larger PNG equity holding in timber developments by way of nationally-owned lumber department corporations. Export tax on unprocessed logs was raised from 5% to 10% fob value. By January '82 two corporations were operating, and two more were well advanced in planning. It is expected two corporations will be brought on stream each year.

It is intended that there be a white paper on forest research this year, which will plot the course for future research activities and expenditure and which, with the industrial policy above, and one further white paper, on reforestation, will form the basis of a new Forestry Act to be written in late '82-83.

Forest legislation

Current laws of Papua New Guinea relating to forestry are contained in the Forestry Act and the Forestry (Private Dealings) Act. These acts place the responsibility of conservation and management of forests under the minister for forests, through the Office of Forests, in the Department of Primary Industry. These acts, together with their subsidiary regulations, form the legal basis for the implementation of forest policy.

The field staff of the operations division of the Office of Forests transferred to the provincial government administration on 1 January 1978. Nonetheless the allocation of forest development areas and the issuing of timber permits will remain, with due consultation with relevant provinces, with the national government.

The forests of Papua New Guinea are owned by the people. Forestry legislation provides for the exploitation of these forests in three ways: timber rights purchase, native timber authority, and agreement under the Forestry (Private Dealings) Act 1971.

Timber rights purchase — This is the method for large-scale exploitation. Under Section 9 of the Forestry Act, the government acquires timber rights (the rights of felling, cutting, removing or disposing of the timber), by purchase when the customary owners are willing to so dispose of the timber growing on their land. Following a timber rights purchase, a permit to remove timber can then be issued to a concessionaire on agreed terms and conditions including the payment of royalties, a portion (25 per cent) of which is given to the owners. The remainder of royalties collected goes to the provincial government concerned (exclusive of costs of collection to the national government).

Native timber authority — Under Part IV of the forestry regulation, forest inspectors are empowered to issue these authorities on payment of a fee of 50 toea (half a Kina) to any person to purchase direct from a customary owners. They relate to small volumes only.

Agreement under the Forestry (Private Dealings) Act 1971 — Under this act, owners of timber by natural custom can dispose of their timber to any person provided the Minister for Forests is satisfied that: the interests of the owners are protected; there is no conflict with the national interest; and prospects for economic development are considered acceptable. Two agreements only have been approved to date under the act. ○ A.M.D. YAUIEB

Land clearance studies at IITA

Agricultural research scientists and government ministries of agriculture in the humid and subhumid areas of West Africa are under pressure to increase food crop production as rapidly as possible. Population in this area is growing at nearly double the rate of the rest of the world, and increasing food imports threaten the currency reserves of many countries struggling to establish economic independence.

Two approaches seem obvious—increasing, through technology, the amount of food produced per hectare, and increasing the number of hectares under cultivation. The second of these two approaches—bringing the estimated 50 percent of West African agricultural land not under regular cultivation into the food chain—can only be successful if certain soil management problems are solved. The International Institute of Tropical Agriculture (IITA), at Ibadan, Nigeria, is currently engaged in land clearance and post-clearing studies, attempting to identify the techniques that will best preserve soil fertility.

Until recently, much of the forest land cleared for cultivation in tropical Africa was cleared by shifting cultivators using traditional hand tools. Damage to the soil was minimal. The widely practiced bush fallow system of land use, which involved a few years of cultivation alternating with several years of fallowing to restore fertility, provided traditional farmers with an efficient, balanced and stable system for maintaining soil productivity.

Population pressures have made the bush fallow system a luxury few African economies can afford. Land development and continuous production appears to be an inevitable alternative. However, much of the West African soil is fragile and shallow. Heavy seasonal rains increase the danger of erosion. IITA soil scientists believe the use of appropriate clearing technology can minimize soil degradation in large-scale clearing. Productivity must then be sustained through judicious post-clearing soil management, suitable cropping sequences and crop combinations. They further believe that if soil and other agro-climatic factors are not considered during the clearing, the damage can be irreversible.

The objectives of the study now going on at IITA are to evaluate the efficiency of various land-clearing methods, to examine the costs in post-clearing land development, and to measure the effects of clearing methods on crop yields and erosion.

A secondary forest area at the institute's farm north of Ibadan has been divided into three to four hectare plots and cleared, using four methods of deforestation—traditional (hand labour, native tools, trees over 45 cm in girth remain), manual (native tools plus chain saws, trees and stumps removed), crawler tractor-mounted shear blade (cuts growth off at ground level), and tractor with tree pusher-root rake (removes trees, stumps and debris to a depth of 50 cm).

Traditional farming is being practiced on the traditionally cleared plots. Crops (maize and cassava) are planted through the standing and felled trees with manually operated equipment developed at IITA for the small farmer. Both no-tillage and terraced conventional tillage are used for crop establishment on land cleared either manually or with the tree pusher. Only no-tillage is used on land cleared with the

shear blade because roots and stumps were not removed. (No-till farming is the establishment of a crop without seed-bed preparation, using chemicals for weed control.) Fifteen hectares remain as a forested control.

Crop yields, water runoff and soil loss are being monitored.

Manual clearing proved to be the slowest and least efficient method of land clearing. Man-days for clearing alone (without removing the unburned trees from the fields) totalled 177 man-days per hectare. The incomplete clearing for traditional farming operations required one third of the time (57 man-days/ha) compared with complete manual clearing.

Mechanized clearing by tractor with shear blade attachment was the quickest and most efficient method (1.94 working hours/ha), followed by the tree pusher-root rake attachment (2.70 hours/ha). Since roots and stumps are left in the ground, land cleared by the shear blade treatment can only be cultivated by the no-tillage system.

As might be expected, deforestation resulted in a significant increase in water runoff and seepage flow over the entire cleared watershed compared with the forested control. However, land clearing and soil management methods had a significant effect on the amount of runoff and accompanying soil loss. (see Table 1). The soil loss in the tree pusher-root rake method was 1 750 times greater than with the traditional method, 7 times greater than with manual clearing (with trees and stumps removed) and nearly 5 times greater than with the shear blade treatment.

The water runoff from the tree pusher-root rake method was 77, 5.7 and 2.3 times more than the traditional, manual, and shear blade methods, respectively. There are no significant figures over a long enough period of time to indicate clearly the effect on crop yields.

Overall, it would appear that any kind of manual clearing is too slow and expensive, at the cost of Nigerian labour, to be considered in the development of large farms. It may be feasible in countries where labour is not costly. Of the two mechanized methods tested at IITA, shear blade followed by no-tillage was significantly superior in terms of soil conservation. However, this system has resulted in rapid bush regrowth and mechanical harvesting problems for some crops. To evaluate the competitive effect of bush regrowth on maize production, IITA conducted a series of experiments measuring soil moisture in bare plots, plots with bush growth alone, maize alone, and maize and bush regrowth together.

First year results indicate that maize and bush both drew moisture from the soil to a depth of 30 cm and that the bush did compete strongly for available water. During dry spells, soil moisture potential in maize plus bush regrowth was from 50 to 100 cm lower than in maize alone. Further, resat-

TABLE 1. Effects of methods of deforestation and tillage systems on soil and water loss, grain yield and tons of soil lost per ton of grain produced

Land Clearing Treatment	Soil Loss Erosion (t/ha)	Water Loss Runoff (mm)	Grain Yield (t/ha)	t/Soil Loss t/Grain Yield
Traditional method	0.01	2.64	0.5	0.02
Manual clearing — no tillage	0.37	15.50	1.6	0.23
Manual clearing — conventional tillage	4.64	54.30	1.6	2.90
Crawler tractor (shear blade) — no tillage	3.82	85.66	2.0	1.91
Crawler tractor (tree pusher/root rake) — no tillage	15.36	153.06	1.4	10.97
Crawler tractor (tree pusher/root rake) — conventional tillage	19.57	250.33	1.8	10.87

Source: IITA Research Highlights 1979.



Maize fields ravaged by locusts in Ethiopia. Forests can provide protection not only for soil cover but for crops, acting as breaks against wind, storms and even insect invasions

turation was never complete, even during frequent rains, in plots with bush regrowth. Maize grown with bush wilted more frequently than maize grown alone, and took longer to recover.

The land clearance research at IITA raises problems as it answers questions. Controlling soil erosion must be balanced with crop production. Water conservation is also important. Land clearing followed by no-till farming shows promise, but further research on ways to suppress bush regrowth—possibly with herbicides, or with an aggressive cover crop, or with mechanical methods of root cutting and ripping—is needed.

An interdisciplinary team of farming systems scientists is addressing these problems with a great sense of urgency. It is clear, however, that presently used mechanized methods of land clearing followed by conventional tillage practices—despite the use of contour banks and other conservation measures—are leading to large-scale destruction of land in the tropics. ○

Safeguarding the forests

Rural energy centres in tropical Africa

by A. BOUDIN and A. GODART (*)

The development of rural units is of great importance in the 'self-centred' development theory, which aims for small village zones that are prosperous economically, socially and culturally.

However, poor local energy supplies restrict the development both of these zones and of the corresponding means of production.

One way of organizing village societies is to have a rural energy centre as a focus.

This idea was mooted by the UN Environment Programme as a way of solving the basic energy and water supply problems in rural areas. We think that a viable solution would be to use renewable energy, as it is reliable in the long term and available everywhere, and it would reduce or entirely do away with energy transport costs, thereby making the villages considerably more independent.

Energy requirements

Energy is mainly required for cooking, lighting, pumping up drinking water, powering radio and TV sets and perhaps to help raise small animals and plough the fields.

A village of a thousand people (i.e. 200 families) would have the following estimated requirements:

— Cooking:	87 600 kWh/yr
300 watts per family, 4 hours per day.	
— Lighting:	26 280 kWh/yr
120 watts per family, 3 hours per day.	
— Pumping drinking water (average):	1 000 kWh/yr
30 litres per family per day.	
— Information (radio and TV):	2 000 kWh/yr
— Feeding cattle (500 head):	1 500 kWh/yr
10 m ³ per day.	

This gives us a probable figure of 120 000 kWh p.a. and if the village sets up small manufacturing units, the energy requirements of the machinery also have to be added.

Available energy resources

In addition to their own work, villagers have eight sources of energy—wood, charcoal, oil, butane, the sun, the wind, draft animals and the biomass (excluding firewood).

Traditionally, the villagers' fuel is wood and there are two major disadvantages to it. It has to be fetched and carried and it leads to deforestation, which is why it is extremely urgent to replace it by some other form of fuel.

Charcoal is in a similar situation as it is, of course, made from wood. And it has to be taken to the towns from the place where it is produced by trucks which use imported, non-renewable energy (i.e. diesel oil and petrol).

So it is with ecological balance and economic profitability in mind that we propose replacing conventional sources of energy by power from an aquatic plant, the water hyacinth.

The water hyacinth — wonder weed

The water hyacinth is a semi-amphibious floating plant that is very common in the tropics. It is considered to be a scourge, being the most productive plant in the vegetable kingdom, with a growth rate (weight, number and surface area) of 9-15 % per day, so that it doubles its size in a week. It can produce up to 150 t dry matter per ha p.a.—i.e. nearly 2000 t gross.

Such rapid growth seriously interferes with navigation, fishing and hydraulic and hydroelectric installations, and has epidemiological consequences in that it encourages certain harmful species.

A campaign has been organized to try to destroy it (this has not been very successful) and to use it (this has led to a number of encouraging studies, regardless of the main problem of the high water content—90-95 %—which means handling enormous quantities for fairly small results).

The plant (dry weight) is fairly rich in protein and fat and has six vitamins. It has been used up to 60 % in cattle feed. These results appear to be able to be reproduced, although additional studies are necessary for particular cases.

It can be converted by fermentation into biogas containing 70 % methane. One hectare of pond could therefore produce 70 000 m³ of biogas p.a., or more than 200 000 kWh, in optimum conditions.

It is fairly rich in nitrogen, phosphate and potassium and so can be used as compost to enrich soil, which it also supplies with organic materials and humidity. The liquid waste from the methane digesters always contains these fertilizers.

It has also been used to purify waste and eutrophic water as it can absorb dissolved chemicals.

It has also been used, not always successfully, in the manufacture of paper pulp, packaging and baskets (fibres) carotene and potassium.

So it is clear that this plant can and should be used more than it is at the moment. It could well become an essential resource in tropical villages, as it can be gathered downstream or grown in ponds.

Better utilization of the resources of the biomass, particularly fast-growing plants such as the water hyacinth, would solve some of the developing countries' major problems, those of energy, deforestation and urbanization. ○

A.B. and A.G.

Many different sorts of power are used: for felling (mechanical), removing the felled logs (manpower), and transport to the consumer (mechanical, manpower and by river)



(*) Both the authors teach at the Université Libre de Bruxelles.

Community aid

Attacking the problem of deforestation in the developing countries does not just mean coping with the vast job of conserving and protecting the trees. It also means reconstituting the forests.

Until 1970, it has to be said, the financing of forestry projects, in the strict sense of the term, was not a priority in the EEC Commission. Far from it. Emphasis in the agricultural sector was systematically on productive projects. There was a simple reason for this. The Commission's aid programmes can only really reflect the applications for financing which the developing countries submit, in accordance with the conventions signed with them.

However, with Lomé I, things began to change. The developing countries began to wake up to the problem of deforestation and how it affected their future. A number of factors clearly and simultaneously contributed to this awakening. We all know what they are, but it is worth repeating them, if only to help counter them effectively. They were, mainly, demographic pressure and the droughts of the 1970s.

In 1975, the Commission's financing programmes included the first forestry projects, both forestry schemes pure and forest protection and afforestation sections in integrated rural development operations.

I shall briefly mention one or two of the schemes covered by financing agreements with the developing countries at this period.

Burundi, 1977: 3200 ha of trees planted on slopes on the west of the Congo-Nile crest to produce timber (pine) (ECU 2 500 000). For reference, I should mention that, at this period, the forest had been reduced to no more than 100 000 ha, or 3 ares per inhabitant, whereas 10 years previously the figure had been 10 ares.

Trinidad and Tobago, 1977: 600 ha planted with teak and 900 ha with pine to produce timber (ECU 1 000 000).

Solomon Islands, 1980: 1800 ha planted with acajou for export (ECU 625 000).

Niger, 1977: Integrated rural development project in the Zinder district. The forestry section of this project was a pilot scheme and included:

- the planting of wind-breaks by the lakes (40 km) and on dunes (10 km p.a.);
- the planting of hedges around developed lakes (120 km);
- forage trees near water holes (80 ha);
- protection of 400 ha of over-used land (replanting).

Niger, same period: A similar operation was run in the Badéguichéri district, where the forestry section included:

- hedges and wind-breaks;
- village tree planting schemes (20 ha p.a.);
- a central nursery.

The peasant farmers themselves dug the holes, planted the prosopis, nim, jujubes etc. and protected and maintained the plantations.

With Lomé II, the Commission began financing bigger forestry projects. But more important was the policy behind them. Although the productive side was not altogether lost to sight, the main emphasis was now on inventorying, conserving and reconstituting the forests, principally in geographical areas where the water situation was difficult, particularly in the Sahel.

Examples of this are:

Mauritania, 1982: Pilot project to regenerate gum tree plantations (ECU 1 000 000).

This project was preceded by a major study which inventoried all Mauritanian gum trees (from the Senegal river in the south to the 200 mm isohyetal line in the north) by tele-detection and the use of satellite pictures. The study was used to decide which zones were the most suitable for reconstitution of the natural acacia forest and replanting, in the light of the ecological qualities of the areas in question. In stage one of the project, 1500 ha of trees (*A. senegal* & *A. laeta*) will be planted.

Senegal, 1982: Planting 2500 ha of gum trees. These are village plantations in blocks of 50-100 ha in the most suitable areas and in places where this tree grows naturally.

Sudan: A study with similar aims is due to be launched shortly.

Guinea Bissau, 1982: The Commission will shortly be financing a general study of forest cover throughout the country. The aim will be to decide which areas should be preserved, developed, protected and exploited and which should be left for farming and herding.

The study, covering more than 2 million ha, will be carried out by teledetection.

These last examples clearly illustrate the line the Commission is taking, showing that it is resolutely in favour of any project the basic aim of which is to protect or reconstitute plant life in the developing countries—provided, of course, the countries concerned apply for aid to do so.

But the problems are not ones of intentions or of financing. That would be too easy. Difficulties obviously arise at the practical stage, when projects are actually implemented and then have to be maintained, and to solve them, we have first and foremost to understand the causes and how land is deforested.

There are three main ways in which the tropical countries lose their forests. The conditions of each are very different and they depend, above all, on the ecology of the site. Causes may vary widely. I shall deal with the three following types:

- deforestation in low altitude tropical rain-forests;
- deforestation in temperate rain-forests in mountain areas;
- deforestation in Sahel and Sudan-type areas.

The great equatorial forest

In the tropics, in such countries as Liberia, the Ivory Coast, Gabon and Zaire, there tends to be low population density and regular, heavy rainfall, so deforestation cannot be put down to either population pressure or the climate. The essential cause of the deterioration of the forest in these areas is the felling of trees far beyond what is technically reasonable. Forest soil tends to be fragile and over-intensive exploitation deteriorates it rapidly; reconstitution is an extremely slow process. And all too often, methods of replanting are used with no thought for the real ecological requirements of the species in question. People forget that species that are sun-loving when fully grown need relatively dense forest cover when they are young. There have been projects to replant large areas where forests, in fairly bad condition, have been felled and new species planted in rows in the sun. It goes without saying that such schemes never resulted in the forest being reconstituted because of repeated drought, overtaking by grass, lack of expensive upkeep or fire and it



Traditional exploitation of the forests in the ACP states has been overtaken by mechanical developments, as here in the Solomon Islands

would have been better to protect the forest as it stood by supervision and fire control.

There is obviously a problem with the major, permanent crops, the palms, rubber trees and coffee and cocoa bushes and so on. They are often blamed for deforestation and this is an impression that has to be erased. For a start, in those African countries where the ecology is right, industrial crops of this kind only represent 5% of total crops. And second, as far as protection of the soil and plant cover is concerned, the exchange is more or less ideal. These crops, the covering plants grown amongst them and the maintenance of the whole scheme soon replaces one forest with another.

Mountain forests

The process is a much more damaging one here. Such countries as Zaire (Kivu), Kenya, Rwanda, Burundi and Madagascar are involved and they are places where the population density is high and there is pressure on the land as a result. There are cattle everywhere and the ground tends to be irregular. The forest is burned to make way for pasture, and fires on slopes are very destructive because they move upwards fast.

Once the ground loses its shrubs, the soil deteriorates rapidly due to erosion by the rain and cropping by the cattle. Tree cover will therefore find it very difficult to get a hold again, even if herding and farming are discontinued.

There are technical methods of reforestation on these soils based on contour lines and the use of species that fit in with the ecological conditions of the central African forests, but they cost a lot and success, which depends on proper maintenance, is also expensive.

Deforestation in arid or semi-arid

Here we deal with the whole of the Sahel, a large part of the Sudan area and even some of the regions around Guinea.

The population is dense in places, the herds very large and the rainfall very sporadic. Productivity is low.

Land pressure leads directly and rapidly to desertification, and it is heightened by the development of rainfed crops rotated with industrial crops such as cotton and groundnuts. This last point is worthy of comment.

The concern with production which the groundnut and cotton companies have encouraged has always been more important than productivity, and there has been a constant drive to bring more land under cultivation and, therefore, to clear more land as a result. The forest is destroyed. It undergoes extensive exploitation and in the end the soil deteriorates, often past the point of no return. Vast areas may be involved. In Senegal, for example, around 1 000 000 ha of groundnuts have been cultivated every year for the past two decades.

With a theoretical rotation period of four years and fallow periods that all fairly similar, this gives $8 \times 1\,000\,000$ ha—or 8 million ha of land cleared. Given an average annual yield of about 800 kg per ha, the true yield over the years is in fact 100 kg per ha! This is both absurd and unacceptable. It is not worth destroying hundreds of thousands of hectares of natural vegetation for this.

So, it has to be admitted that the development of annual industrial crops over vast areas (35% of the total of all crops in Africa) makes a big contribution to deforestation and, generally speaking, that all rainfed crops are actively helping desertify the arid and semi-arid areas.

If this process is to be stopped then intensive agriculture, i.e. methods producing more from less land, has to be introduced as quickly as possible. We all know now that intensive methods can only be used where there are regular, adequate supplies of water, so the only reasonable thing to do is bring in irrigation. This does not necessarily mean big dams and big investments. Irrigated crops can involve a number of things. There may be micro-irrigation facilities, wells, improved lakes and side streams, small plots and so on.

And where does reforestation fit into all this?

There is no miracle answer. What already exists has to be protected, the areas under cultivation have to be restricted and the cattle routes have to be rationalized.

The forest is burning; the desert is advancing by several dozen km a year, they say; fallow periods are being phased out, and the climate is changing. In the Ivory Coast, for example, the tropical forest has decreased from 14 million to 2 million ha in only 30 years.

And in black Africa, where there are 350 million inhabitants now, there will be up to 800 million come the year 2000.

Sandstorms now bury Dakar several times a year. The harmattan blows as far as Abidjan. People in Bamako, Niamey and Ouagadougou have to go 50 or 100 km to get firewood these days.

In a Sahel region where 25% of the land is still natural forest, there only need to be more than 25 people to the km^2 for the tree cover to be eaten away. Assuming that the forest produces 0.5 m^3 per ha p.a. and that each person consumes 0.5 m^3 wood p.a., then: $25 \text{ people} \times 0.5 \text{ m}^3 = 12.5 \text{ m}^3$ i.e. exactly the annual production of one quarter of 1 km^2 of forest.

Once wood consumption catches up with natural production, any felling is at the expense of the forest itself. If the population increases by 2% p.a., 10% of the trees will be lost in nine years, 20% after 12 years and the whole lot after 22 years.

I think we have to encourage the developing countries to submit a lot of forestry projects and projects with forestry

Forestry projects financed by the EDF

			Year of financing	Amount ECU '000
1st EDF	Gabon	Oukoumé plantations : equipment	1964	470
4th EDF	Burundi	Production of building timber	1977	2 151
	Solomon Is.	Reforestation	1980	625
	Trinidad	Reforestation of Palrick	1977	1 020
5th EDF	Burundi	Replanting Mosso area	1983 ⁽¹⁾	(4 000)
	Gabon	Replanting	1983 ⁽¹⁾	(3 500)
	Guinea Bissau	Forestry production	1983 ⁽¹⁾	(2 500)
	Mauritania	Planting gum trees	March 1982	1 000
	Senegal	Planting gum trees	April 1982	2 400
	Solomon Is.	Viru forest plantation	July 1982	1 150
	Sudan	Gum arabic project	1983 ⁽¹⁾	(6 000)

(1) Projects planned for 1983 but not yet drawn up.

elements in them and to finance them as far as the available cash will allow. This is a long-term investment as far as these countries are concerned. It would be a mistake to calculate profitability and such a calculation would, in any case, be far more illusory than in any other project. The productive side of forestry projects (take gum trees as timber, or even firewood) is secondary. It is an attraction to the people concerned, of course, but the medium and long-term aim is, ultimately, survival.

There would be no point in ploughing massive amounts of cash into food production today and leaving the countries to die tomorrow because they had no good arable land (which the food projects themselves would have helped destroy).

How should these projects be implemented?

1. First, by inventorying the existing forests (quantity and quality).

Present techniques of teledetection and interpretation of photos taken from satellites are adequate for this and will enable the job to be done even more efficiently in the near future. These are the only techniques which are cost-effective at the moment.

2. Protecting existing forests simply by clearly marking the boundaries and providing fire-breaks and equipment for fire-fighting teams.

3. Improving deteriorated areas.

4. Replanting in the most favourable areas, i.e. those where it is felt the forest could start up again.

5. Adapting the techniques and the species to the ecology.

6. Making the local people aware of the problems and involving them in supervising and reconstituting the forest. This should be done through approaches tending towards community, village or even family ownership of the new plots or trees, thereby putting responsibility on traditional units.

7. Intensifying crops.

8. Rationalizing herding.

This, briefly, is the Commission's position on the vital problem of deforestation and the policy it intends following when it comes to setting up any reforestation projects submitted to it. ○

JACQUES HECO

*Directorate general for development,
EEC Commission*

Promoting tropical African wood

Many kinds of African timber are unfamiliar, or even unknown, to potential users in Europe. The EEC Commission has not only been helping to market them but also looking into questions of standardization and treatment. Promoting these kinds of wood has meant researching into their properties, selecting the more promising species, and carrying out laboratory and industrial tests. A major information campaign has then followed in all the EEC countries, providing full technical data and illustrations of the various kinds of wood and their industrial uses. A special stand made of different African timbers has been taken around the main European trade fairs concerned with wood. Recent statistics on European imports of African timber show that the promotion campaign has been successful: imports of new species have risen sharply.

As regards standardization and treatment, detailed studies have been carried out to provide a basis for regulations. These allow a classification by quality of polished tropical wood species, guaranteeing consistent standards for the end-users. These new regulations are binding; they will offer several advantages and allow a very marked improvement in the conditions under which African timber is produced and sold. The member states of the Organisation Africaine des Bois (OAB)—African timber organization—have clearly expressed their wish to see an increase in production.

Since the OAB was set up, the Commission has constantly called for closer concertation between the African producers and European importers, in order to programme timber production according to the likely demand. This is very important for both sides and should improve the trading conditions. This concertation was considerably advanced at the meeting organized by the Commission in Brazzaville (October 1980), when there was agreement on a joint approach to the many problems of African timber production and promotion. The various trade representatives and officials will meet periodically to continue their work together.

The Commission will also be helping the OAB countries by detaching a European expert, at their request, to develop OAB influence in all relevant fields, especially as regards inter-African relations

J. THOREAU

Directorate-general for development

EIB and EDF help combat deforestation in the ACP countries

Community development aid (US \$ 1 200 million or 3.5 % of all world aid in 1980) comes from three main sources. They include the European Investment Bank (EIB) and the European Development Fund (EDF), which gave 17 % and 39 % respectively of the financial contributions in 1980.

In Lomé II, which is now in effect, the importance of protecting the environment is stressed explicitly and, with reference to deforestation in particular, the problems of firewood and establishing a link between the exploitation of forests and safeguarding the natural heritage are made clear.

Only 14.4 % of EIB loans in 1981 were allocated to non-EEC countries. The projects financed were in industry, mining, energy, tourism and productive economic infrastructure in general. A large part of the financing went to the big agro-industrial complexes, including oil palm, sugar cane and other plantations, which may have a sound effect on the environment (in that they anchor and protect the soil) but often involve deforestation in the early stages. So far, only one forestry project proper has been financed by the EIB. This was the Upper Demarara project in Guyana, a scheme that was co-financed with the EDF, the World Bank and the Guyanese government. The overall aim, apart from the general one of promoting the development of an underpopulated area, was to produce timber, 80 % of it for export. EEC aid is covering the creation of a firm that will be felling the trees and running a sawmill, and the World Bank is being left the entire responsibility for reforestation.

The EDF has given the ACP countries grants mainly for agriculture, infrastructure and rural and social development. The 5th EDF puts priority on rural development, which gets 40 % of the resources. So far, deforestation has only received a moderate amount of attention (ECU 11 400 000 or 0.24 % of the total amount of the 5th fund), although there is progress in comparison with the 4th EDF, where the figure was ECU 3 700 000 or 0.12 %. So far, the EDF has reforested 29 081 ha, although this is far short of estimated needs.

The EDF is financing three kinds of forestry schemes : soil conservation schemes, integrated agricultural projects and forestry operations proper. The soil conservation schemes (in Cape Verde and Barbados) are aimed at recuperating land for the local population, using techniques that are suitable for the climate in the area. Most of the integrated agricultural projects (in Mali, Cameroon and Rwanda), of which there are a large number in the 5th EDF, include some kind of forestry campaign. Reforestation tends to be over a limited area in these cases, but it is enough to meet the local needs for firewood and timber. These integrated projects also include planting, so there are trees to protect crops and anchor the soil. Experiments have shown that the various kinds of planting are often ineffective if the local population is not involved in the project and the traditional land distribution is not respected.

The forestry projects proper (in Mauritania, Senegal, Burundi, Gabon and the Solomon Islands), of which there are more in the 5th EDF than in previous ones, cover much bigger areas. The aim of forestry exploitation is to meet the



PNG information

Forest in Papua New Guinea. Financing organizations need to accept reforestation not only as a viable economic investment but also as an environmental necessity

local need for wood, particularly in countries, like Burundi, where the shortage is particularly acute. But in most places, the aim of production, in the long term at least, is to produce wood or derivatives for export. The reforestation side of things is linked to the problems of soil protection in many of the projects, especially in the Sahel. There are no EDF projects dealing just with preserving the forests.

The regional breakdown of projects by zone subject to desertification and zone of tropical forest suggests that in future:

- in West Africa, with large tracts of land already or on the way to being desertified, the anti-erosion campaign is a necessity reflected in most of EDF projects, of which there are a fair number, in this region. A drive to protect forests on the southern fringe should be encouraged;
- in central Africa, where the problems are those of renewal and conservation of the forest, EDF projects tend to meet local needs. However, more projects could well be run;
- in East Africa, where there are various stages of desertification and a problem of deterioration of the forest, EDF projects do not seem adequate and they only provide a partial answer to the problems of the region;
- in southern Africa, where there is desertification but to a far lesser extent than elsewhere, there have been practically no EDF projects so far;
- in the Caribbean, where erosion and forest preservation are problems, EDF schemes are geared to setting up forestry projects on the basis of regional studies on rationalizing forestry production;
- lastly, in the Pacific, forests are mainly tropical and EDF schemes are being run to help restore them.

Special aid for the least developed countries (LDCs) under the 5th EDF should mean help with the campaign against desertification, which is a major obstacle to development in many cases, and with renewing their forest resources. At the moment, only five of the LDCs under the 4th EDF and two under the 5th EDF have had financing for forestry projects. o

PALOMA AGRASOT

Public housing programmes are not working

by Jorge E. HARDOY and David SATTERTHWAITE (*)

Poor housing conditions and the lack of basic services, such as potable water and the safe disposal of household and human waste, are perhaps the most important factors in the high degree of mortality, disease and disablement still prevalent throughout the Third World.

Yet most Third World governments' housing policies have made little impression on improving their people's housing and living conditions. In response to what they see as a large urban housing deficit, governments generally concentrate the few resources they allocate to housing on building (or financing the construction of) conventional houses. Because of high units costs, the number built is tiny in proportion to need. We seek to show that scarce financial, technical and managerial resources could be far more effectively employed in increasing the supply of basic housing components—land, loans, building materials and services like piped water—than actually trying to build houses themselves.

Although reliable information on housing and living conditions in virtually all ACP nations is lacking (few governments have collected an adequate data base from which to design and implement effective policies), what information does exist points to very poor housing conditions for the majority of people. We present some examples of housing conditions in sub-Saharan African nations in table 1.

Three conditions can be drawn from existing data. The first is that in the major cities, populations have grown far faster than the stock of conventional housing units supplied with piped water and a safe latrine. The main rea-

son for cities' rapid growth is simply the fact that most public and private capital investment has been concentrated there. The second is that very little is known about housing and living conditions in small towns and rural areas (where the vast majority of people and most of the chronic poor in ACP nations live) apart from the fact that virtually all the people live in self-constructed dwellings and most lack safe water supplies, adequate provision for sanitation and access to primary health care. The incidence of diseases related

to contaminated water, inadequate hygiene within the house and poor living environments, such as dysentery, cholera, TB, child diarrhoea, trachoma and worm infections, is the starkest evidence of this.

The third conclusion is that in most nations, housing and living conditions for the poor majority have not improved over the last decade. For many, they have deteriorated. This is even true in nations whose economies grew rapidly in the 1980s and early '70s. Improving poor households' economic base by whatever means is one of the most effective ways of improving housing conditions. But where national economies grew rapidly, most poor households did not see a real rise in income. Indeed, since a house's quality

Table 1. Housing and living conditions in selected ACP nations

Ivory Coast: 65% of Abidjan's population use pit latrines or unlined water courses for sanitation and only 20% are served by sewers. In 1976, around 80% of the national population did not have access to safe water.

Kenya: In Nairobi, 37% of the population were living in uncontrolled or squatter settlements in 1970. Comparable proportions of other major urban centres also live in such settlements. In rural areas, over three-quarters of the population lack easy access to safe water.

Liberia: According to a population and housing census in 1974, the vast majority of Monrovia's population live in sub-standard houses and overcrowded conditions. A third of all houses lacked water, sewage and electricity and only a quarter had all three. Many of Monrovia's low income housing areas have grown up on land with serious drainage and flood control problems. In 1976, some three quarters of the national population did not have access to safe water.

Mauritania: Half or more of the inhabitants of Nouakchott and of towns like Rossy are living in tents or semi-permanent shacks with no access to safe water and sanitation services. A 1979 report stated that fewer than 17% of all urban households were connected to a water distribution system.

Nigeria: By the mid-seventies, the urban housing deficit was officially

put at between 840 000 and 1 250 000 units. Overcrowding, poor sanitary facilities and absence of piped water connections characterize large proportions of the housing in major cities. And in rural areas, over three quarters of the people lack easy access to safe water.

Sierra Leone: In Freetown, shortage of houses, high densities, poor condition of buildings and an inadequate supply of services are major problems. The low income groups (which make up most of the population) are constantly exposed to the risk of endemic disease either water-borne as ground water in the built up area is polluted or spread by vectors which breed in stagnant pools or on the piles of refuse which litter the streets.

Togo: In some parts of Lomé, open sewers are found along many streets which become stagnant breeding grounds for malarial mosquitoes in the dry season and often overflow creating large polluted ponds which make many streets impassable in the rainy season. According to one recent survey, around 40% of families in Lomé's low income areas have no sanitary facilities at all while another 40% have to rely on bucket latrines. Less than 15% of Lomé's population had house connections for water in 1977. A large proportion of the population have to rely on polluted shallow wells for their water.

Source: See note (1).

(*) Dr Jorge Hardoy directs IIED's human settlements programme out of IIED's Buenos Aires office while David Satterthwaite is this programme's representative in IIED's London office. This article is based on a series of country studies undertaken in collaboration with the Centre for Urban and Regional Research (Buenos Aires, Argentina), the Department of Architecture (Khartoum University, the Sudan), the Faculty of Environmental Design (Lagos University, Nigeria) and the Institute of Development Studies (Mysore University, India). This part of the programme's work is funded by the Canadian International Development Agency.

so often gives the most visible indication of wealth or poverty, the poor housing conditions most of the population endure is the most obvious sign of the failure of economic growth to "trickel down" to poorer groups. And housing costs have risen faster than incomes as the cost of an urban plot, building materials and loans have grown rapidly.

Governments' role in housing

Despite the existence of housing ministries or national housing authorities, government agencies actually play a very minor role in housing construction. The majority of urban houses and essentially all rural houses continue to be built by the inhabitants with no support from any official agency. This is even the case in the major urban centres where government housing programmes are concentrated. Here, most houses are still built by the people themselves with no building permit and no credit. Very often, they are built on illegally subdivided or occupied land. Only by such actions are many of the urban population (and most of the increment in urban populations) housed.

Governments are becoming more involved in urban housing problems. A recent survey of housing, land and settlement policies in 17 Third World nations (2) (which included Nigeria, Tanzania, Kenya and the Sudan among ACP nations) showed new institutions for financing or building houses being set up or existing institutions being expanded in most nations. But this sur-

Table 2. Urban housing programmes in selected ACP nations	
<p>Nigeria: The Federal Government began financing a major public housing programme in the mid-seventies which under the 1975-80 Plan aimed to build 202 000 units by 1980. This target would meet little more than one year's growth in urban housing needs. And initial reports suggest that actual achievements were far below target and that despite large subsidies, many of the units built were too expensive for lower income households.</p> <p>Kenya: The 1974-78 plan included a major "low-cost" housing and serviced site programme to try and tackle mounting housing problems in major urban centres. While the serviced site schemes met with some success, the 1979-83 plan admitted that "over the last plan period, only 8% of the low-cost units planned were actually completed and these on average cost five times the expected cost."</p>	<p>Tanzania: After concentrating on slum clearance schemes in the 1960s where the construction of new units hardly outpaced the destruction of existing ones, and housing construction by public bodies in the early 1970s which made little impression on rising needs, the emphasis switched to slum and squatter upgrading and to serviced (or un-serviced) site schemes, increasing several fold the number of people reached each year with improved housing conditions through government programmes.</p> <p>The Sudan: After concentrating a large part of the housing budget on building or financing housing construction in the 1960s and early 1970s, the emphasis switched to serviced (and un-serviced) site and house upgrading schemes, increasing severalfold the number of people reached each year with improved housing conditions.</p> <p><i>Source:</i> See note (2).</p>

vey also found that government action was virtually always inadequate and usually ill-directed. Governments' response to mounting housing problems has usually been to concentrate their activities in the major cities (or city) and try to fund the construction of enough units to make up a somewhat arbitrarily defined "housing deficit". Yet to see the major housing problem

as a shortage of units in the major cities is to misunderstand the problem. Virtually everyone has some sort of shelter. The problem is more the poor quality of the sites, houses and neighbourhoods that the poor are forced to live in—with their lack of basic services and community facilities. One should also add that although housing problems may be more visible in the few major cities and increasing densities in or around city centres may be a problem, housing conditions in terms of unhealthy living environments are usually as bad (if not worse) in smaller towns and rural areas.

As the examples in table 2 show, public housing programmes to date have made little impression. The number of conventional units built is small in relation to those needing an improved house. Their construction demands scarce technical, financial and managerial skills. And very often, the units actually built are too expensive for the lower income groups, even when a large unit subsidy is given. Public housing programmes are a very expensive way of giving relatively few people an "improved" house.

At project level, some governments acknowledge this failure. For new housing, unit costs can be enormously reduced if public agencies simply provide housing plots with access roads, a water connection to the house (or nearby), loans for materials and some



Photo Mark Edwards

Nigeria was already short of a million housing units in the 1970s

provision for sanitation. These "serviced site" schemes (or on occasion unserviced site schemes) have become more popular in the last decade. Reduced unit costs mean more people can afford an unsubsidized price. In the Sudan, Tanzania, Zambia and Malawi, such projects have become a central part of national housing policies. In addition, slum and squatter upgrading schemes sometimes replace an earlier emphasis on "redevelopment" which simply bulldozed illegal housing and destroyed the one type of house lower income groups could afford.

Upgrading schemes have generally been far more successful than public housing and "redevelopment" projects precisely because they better match the needs and resources of the poor. They also avoid the destruction of the community's social fabric. So too have some serviced site schemes, where the people themselves were consulted and where their own needs and priorities were provided for. In these projects, public agencies' role is thus to respond to community needs and provide only those parts of a dwelling which households or community groups cannot easily provide for themselves—access roads, piped water, garbage disposal, street lighting, community services and, for new developments, land.

Priorities for action

National policies could learn a lot from such an approach. For their emphasis at national level should be similar, i.e. that of increasing the supply (and reducing the cost) of housing components which support the efforts of households, communities and firms in building houses. Priorities become fivefold. The first is the universal provision of safe water and the spreading of knowledge and technology to improve sanitation and personal hygiene. These might seem outside a housing ministry's brief. But it is precisely their provision in collaboration with health care and education programmes from other ministries which will do most to improve housing conditions. The second is to boost the supply of building materials. Building material industries based on indigenous resources remain undeveloped (and very often inhibited by official building regulations which expressly forbid the use of the cheapest and most widely available building materials). Very little research has been done on how to improve the durability and impermeability of traditional materials which the majority use (and will continue to use) to build their houses. The third is to set up or reform housing finance agencies or banks so they ex-



Home sweet home in Lagos, Nigeria

Photo Mark Edwards

tend the small and flexible loans that lower income households need to improve or buy their house. The fourth, which only applies to growing urban centres, is to control land speculation and increase the supply (and thus lower the price) of housing plots. This is perhaps the most difficult. Yet, in city after city, speculative land markets uncontrolled by governments are at the root of squatter settlements and illegal housing construction on dangerous and unhealthy sites. If people cannot afford a legal housing plot, they have to find their own solutions, even if this means living over a swamp or on the side of a ravine subject to landslides.

Some public agencies own a substantial amount of land. In some nations, such as Tanzania and the Sudan, virtually all land is publicly owned. While this in itself is no guarantee that sufficient well-located land will be allocated to self-built housing schemes, it makes it far easier for governments to do so. In Tanzania, Zambia and the Sudan, governments' willingness to allocate land for serviced (or unserviced) site projects has underpinned three of the largest urban housing programmes in Africa in terms of numbers of people reached. And it has done so with relatively modest government expenditure. Other governments with less complete land control often have large tracts of public land which could be used or, in Africa, at least a millennial tradition of communal land ownership on which to base a land policy. But even where Western type private land markets have become firmly embedded, governments can control land prices and prevent speculative holdings of undeveloped land with appropriate taxes and controls. Even in the most capitalist

Western nations, private land markets and the profits made from land sales are subject to considerable government control.

Finally, the fifth priority is to ensure that government efforts respond to the very specific local needs each community has. This means strengthening local governments' capacity, expertise and financial base. It also means programmes which support the efforts of existing community groups who are so often the best institution through which projects can be organized.

Thus, the evidence of past experience in selected ACP nations points to the need for decisive government action to improve housing and living conditions for the poorer sections of their population. And if this action concentrates on working with community groups and on increasing the supply and lowering the price of essential housing components, it will reach far more people, far more successfully, than conventional public housing programmes. ○ J.E.H. and D.S.

(1) Ivory Coast—USAID (1976), "Low Cost Urban Shelter Programme". Kenya — Nairobi figures from World Bank (1980), "Kenya: Population and Development" and water supply figures from World Health Organization estimate for 1980. Liberia — USAID (1977), "Republic of Liberia Shelter Sector Analysis" with water statistics from WHO estimate. Mauritania — USAID (1979), "Mauritania Shelter Sector Assessment". Nigeria — housing deficit from Romconsult, "Study concerning a Ten Year Federal Housing Programme in the 1976-89 Period" with water supply figures from WHO estimate. Sierra Leone — Sara Wakeham (1979), "Housing in Freetown". Togo — USAID (1977), "Togo — Low Income Shelter."

(2) Jorge Hardoy and David Satterthwaite, "Shelter: Need and Response; Housing, Land and Settlement Policies in Seventeen Third World Nations", John Wiley and Sons, 1981.

Planning road investment in developing countries

by André AUCLERT (*)

In mid-May an international conference was held in London's Café Royal on the criteria for planning highway investment in developing countries. Sponsored by the Institution of Civil Engineers and the EEC Commission, it brought together experts from international organizations, including the EEC, the universities and many of the engineering firms involved in road design and construction in developing countries. The aim was to provide a review, by people from many different disciplines and experience, of current practices, and to consider future developments in the field of highway investment. Apart from the opening and closing speeches, there were some 23 contributions to the conference, the results of which, when published, will be an important guide to present thinking on road building in the Third World. The keynote address at the opening session was given by André Auclert, director of finance and administration in the EEC Commission's development directorate, extracts of which are printed below.

I have read with great interest the excellent papers circulated in advance to illuminate your discussions. I should like to make just a few comments, based on my personal experience in the field, in three main areas, namely the so-called conflict between roads and agriculture, the great problem of the economic viability of road projects, and the question of road maintenance.

Agriculture vs. roads

In the selection of priorities for development, it is now fashionable to juxtapose the development of rural production with the improvement of communications. The quality of development plans in developing countries are frequently judged by the importance of efforts in the rural sector, and the mod-

esty of resources devoted to communications, especially to roads.

This is a false dilemma. A finance minister once said, "Give me good politics, I'll give you good finance." It's the same with the relationship between agriculture and roads — between the traffic generated by rural development and the means of communication to support that traffic. After the independence of his country, the former President of Ghana, Doctor Kwame Nkrumah, asked the famous economist, Professor Arthur Lewis, "What should I do to develop the industrialization of my country?" Professor Lewis replied: "Develop your agriculture first!" It's the same for roads and agriculture: "Give me good agriculture, I'll give you good roads."

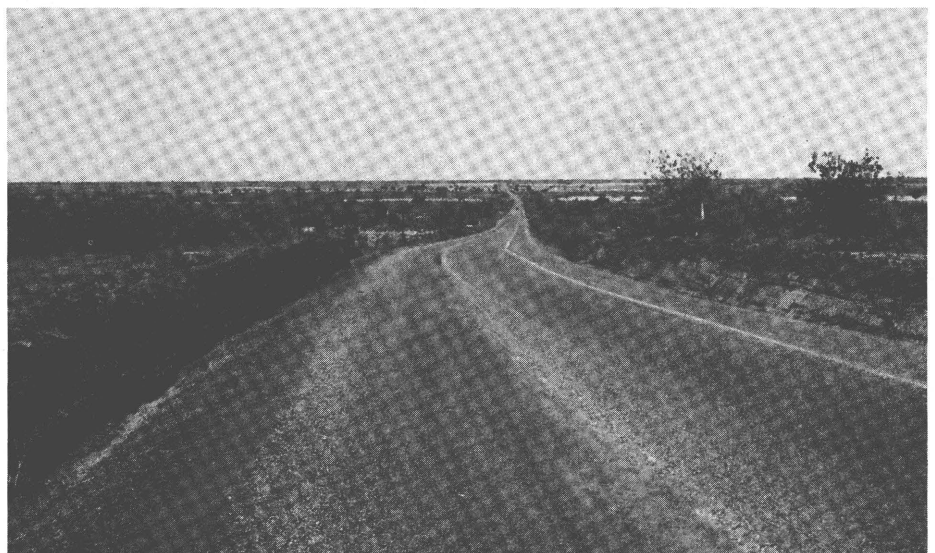
Most of the contributions circulated to this conference deal with the difficult problem of the economic viability of roads. This has many facets.

First, the calculations about the rate of return of a road have to be very accurate, so wide is the range of benefits which can derive from a new road, or even from an improved road. I'll quote a sentence with which I entirely agree from the excellent paper by Atkins Planning on road user charges. "Road user charges generate income

that generally accrues to the government, which disburses money for the maintenance, policing and signing of the road system and for the construction of new or improved roads." They are fixed charges (those levied on a vehicle either once or annually) and variable charges (those that are related to the amount of use of the vehicle, such as taxes on the sale of fuel and lubricants, and tolls). In this respect, I had occasion, during my career in the French civil service, to make a detailed calculation of the profits accruing to the Niger government, during a major cost equalising operation in transport between Eastern Niger and the port of Dahomey. It demonstrated that, due to the importance of taxes levied on road traffic, and on the import of lorries, spare parts, tyres and fuel, an apparently artificial operation based on budgetary subsidies, was, in effect, highly beneficial to the budget. My calculations led the French aid administrators to finance the first bridge built on the river Niger, at Malanville, on the border between Niger and Dahomey.

Traffic generation

Second, we have to be very careful when we speak in terms of generating new traffic on new roads or improved roads. The stimulating paper of the IDA is very conspicuous on this point and I quote from it: "It is not denied that roads can generate their own traffic, but it is futile to expect sizeable "developmental" effects in remote regions with few resources and population. One of the most persistent myths about roads is that virtually any road



The Niamey-Dosso road in Niger was financed by the EDF. The road itself may not generate the traffic, but it nonetheless has a catalytic effect on it

(*) Director in the EEC Commission.

can justify itself because of the traffic it generates. Evaluation studies do not support this general view; some roads have witnessed dramatic traffic build-up, but others have had disappointing results. Also, as road building in Scotland demonstrates, roads can depopulate as well as develop." For my own part, I would be a little more optimistic. In Morocco, Field-Mashal Lyautey designed a very generous road network, anticipating from the very beginning the development of Morocco and the discovery of large phosphate deposits. Maybe you know the reply he made to the wise men who asked him what if phosphates had not been discovered? The reply of Marshal Lyautey was straightforward: "Gentlemen, one always finds phosphates!"

Third, it is quite obvious that in appraising the viability of roads in developing countries, we have to take account of many other factors than the simple rate of return. I have been very interested, in this respect, by the excellent paper produced by University College, London, about the choice of appraisal techniques when resources are limited. This paper underlines "the need to incorporate social and other criteria into assessment frameworks" and "to include social, environmental and aesthetic factors in addition to economic and operational criteria", despite the difficulties in quantifying many of the non-economic benefits. It quotes the example of rural road programmes in the Malay peninsula where the objectives of the programmes were defined as:

- (i) raising the productivity and incomes of the rural people by:
- providing greater access to existing populations;
 - improving marketing and distribution outlets for rural produce;
- (ii) providing the necessary physical infrastructure to meet the security needs for the country.

People understand what the new road can bring

Maybe it is true that the road in itself does not generate the traffic. But it has a kind of catalytic effect on the traffic, mobilizing potentialities and efforts. When I was a district commissioner in Upper Volta, one of my deep concerns was collecting the taxes in the villages. In collecting them, I had to explain what the money collected would be used for. My speeches to the villagers always insisted on road improvements, the effect of which would be that the lorry would come right to the village, carrying goods to be sold and carrying back local production, and regularizing

the level of the prices. Such language, factual and concrete, was always understood.

Finally, I can declare myself in complete agreement with that illuminating paper by Halcrow Fox about the development of priorities for rural roads, when it states: "Rural road projects, by their nature, can give rise to relatively important economic and social development in the areas they serve and a large proportion, if not all the traffic on the new or improved roads, may be associated with new development. Road user savings are not, in this case, a reliable measure of project benefits, and attention must be devoted to the underlying activities which create the associated development and its benefits."

On the question of road maintenance, everyone can be in agreement with the paper from Travers Morgan, and Coopers and Lybrand, when they note, evidently with regret, that "it is all too easy to underestimate maintenance costs in the existing network and devote too many resources to new infrastructure, with adverse long-term results."

The European Development Fund has to face such a problem, which is more and more acute, due to the budgetary problems of developing countries. That's why it has become a general policy to insert in the special conditions of the financing agreements for new road projects a clause stipulating that: "The government undertakes to set aside annually in its budget, funds necessary for the maintenance of the road and to notify the Commission when it draws up its annual budget of the amounts allocated to the maintenance of all the roads financed by Community aid."

Obviously, we have to take care that such a beautiful clause should not remain wishful thinking! During my career in the French civil service in West Africa, I suggested the creation of road funds, separate from the current budget, in which expenditure for road maintenance could be financed by additional taxes on fuel consumption.

This is probably the right and safe solution. Otherwise, we would be rapidly in the situation that we had to face in Chad, with the Fort Lamy-Massaguet road that we financed three times: at the first stage, as an earth road; at a second stage, as an asphalted road because the government had not made the necessary efforts to maintain the earth road; and at a third stage, to reconstruct the asphalted road, which has been no better maintained than the former earth road...

In conclusion, I should like to be rather impertinent and tell you three brief stories, drawn from my field experience about African roads.

In 1950, as a district commissioner in Upper Volta, I was on mission in a very remote village of the district, helping to collect the taxes, when I met a poor peasant. He had only one goat, and had not paid this tax for that goat, which was only five CFA francs, the present equivalent of one penny. Duly summoned by me, he wanted to pay cash. I refused, took him in my car to the capital of the district where he paid at the counter of my financial agent and afterwards he went back to his village on foot. Was it inhuman? The poor peasant was, I saw it on his face, enthusiastic about his trip, during which he had had the occasion to visit parents and friends, to have personal contact with a remote administration, to see how life was outside his village. In Africa, where the African is a great traveller, he had discovered the virtue of communication and I think that, in English as in French, we have a double meaning for the word "communication", which means both the physical means of communication (like a road) and the function of communicating. This story is a lesson about the cultural and social impact of roads in Africa.

In the Ivory Coast, in recent years, the government has built a great new highway between Abidjan and N'Douci, 140 kilometres in length. The highway was built by a Swiss contractor, financed by Swiss banks, and designed generously with technical specifications "as on a European highway". You can drive on it to a maximum speed, there are telephones every kilometre, and you enjoy seeing signs indicating "frequent fog". Do not smile! In this part of the Ivory Coast, the climate is so humid that at dawn, when the ground literally transpires the humidity of the night, you can actually have fog.

In Guinea, we had to inaugurate in 1952, in the presence of the French overseas minister, a new road, well asphalted, that had been financed by French aid. The minister, having driven himself along this road, became very angry because he had not seen any traffic at all. The governor, to facilitate the minister's journey for the inauguration ceremony, had prohibited any traffic on the road! You will also understand now careful we have to be in projecting traffic on a new road, such projections usually being one of the main criteria for planning highway investment in developing countries. ○

A.A.

From handicrafts to industrialization⁽¹⁾

The goal of the developing countries set by the Lima Declaration and Plan of Action is to have a share of 25% of world industrial production by the year 2000. This seems a very ambitious goal when looking at the industrial development and industrial climate of many of the developing countries.

Most of these countries have been either agriculturally-based or have earned their income mainly through the supply of raw materials to the industrialized world, in the form of ore, minerals or other commodities, and are in the starting phase of industrialization. The industrialization process has often taken a "from the top down approach". This means industrialization has been initiated by governments and/or by large investors, mostly from outside, who put up large-scale industries. The effect is that those industries, although based in developing countries, still remain foreign elements there, often owned and managed by foreigners; and many of the "key" people are usually expatriates, because modern technologies and large-scale industries require special skills which do not exist in many developing countries.

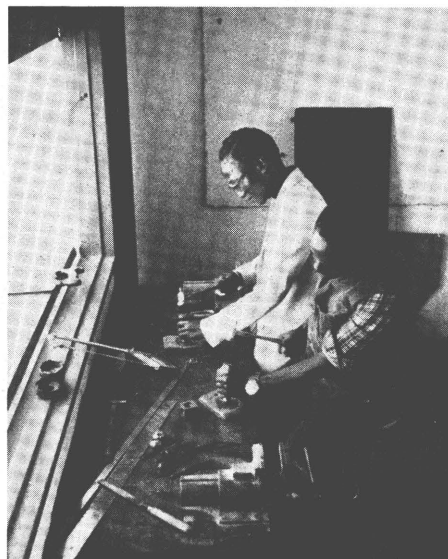
This development in the past has resulted in a lopsided industrial structure, where some large industries exist alongside a fairly large number of artisan workshops, small-scale industries and handicraft units. There is a clear lack of medium-sized industries.

The pressure to find additional employment and accelerate industrialization in general, especially in non-metropolitan areas, has given a greater importance to the development of small-scale industries, craftsmen and handicraft units. Subsequently, the idea of industrialization from the "base upwards" has been given greater priority and consideration. This "base upwards" industrialization has given more impetus to local entrepreneurs and local skills.

This process is in accord with concerns among policy-makers to curb

drifts from the rural areas to congested urban industrial poles, by creating job opportunities and catering to basic needs as well as local demands for a better standard of living. In this light, the development of cottage and craft industries, where millions of poor people are involved, takes on a crucial prominence. Many rural areas will remain untouched by forms of modernism for years to come; yet there is an urgent need to support their people's requirements for some sort of cash income, to satisfy basic personal demands and to gradually enable them to cope with modernity and at the same time preserve their indigenous cultural values and traditions. While it is crucial to develop other sectors of industry, like capital goods, and to expand light engineering industries linked with economic sectors like agricultural production, the question of integrating masses of people into the industrialization process impels policy-makers to take a hard look at the development of traditional industries as well. Generating additional sources of income should take into consideration measures towards improving productivity, upgrading quality and finding new markets. This assistance may take many forms, ranging from mobilizing disparate activities into economies of scale through cooperatives, organizing workplaces and rationalizing methods of production, or introducing modern technology and equipment not only for considerations of efficiency but also to make the work more bearably human.

Craft industries have used local skills for a very long time, but these skills have not been supported and assisted enough. Those entrepreneurs and artisans are humble people who know their trade in the traditional way, having passed on their skills from family to family and from generation to generation. They are not able to deal with ministries and governments, nor public relations, much less get the support they deserve. Therefore, a policy to develop artisan and handicraft activities into small industrial enterprises needs to be undertaken by the governments, to create the environment conducive to their development and to develop further local talents capable of starting and running locally-owned and managed industries.



Training craftsmen in Botswana

Craftsmen are indeed a very potent tool for regional development and for the decentralization of industries, to create employment where the people live and bring jobs to the people rather than bringing people to the jobs.

The small-scale industry and enterprise is a good starting base for medium-sized industries, because a successful entrepreneur employing five people can very well become the manager of a unit employing 50 or more people. So small-scale industry is a valuable training ground for managers and entrepreneurs of medium-sized industry, filling the gap between the large and very small industries, resulting in a sound industrial structure. Therefore small-scale industrialists, artisans and others, are a source of skill and entrepreneurship required for further industrialization of the developing countries. They should be given the right priority in the development process.

In addition, the small-scale sector requires comparatively less technical and managerial proficiency, and can be developed more readily and in a relatively shorter period of time, than the large-scale industries.

The entrepreneur is a central figure in the development of the small-scale sector. He is the one who takes risks and makes decisions, yet he is in one person the owner, the production manager, the foreman, etc. and responsible for marketing, financing, public relations and everything involved in a small-scale enterprise. Therefore the identification and selection of entrepreneurs is an important element in the development of the small-scale sector

(1) UNIDO.



Organizing craftsmanship on a collective basis need not lead to mass production

and, at the same time, a prerequisite for using, assisting and developing locally available talents and skills. Subsequently, the conversion and upgrading of artisans and handicraft people into entrepreneurs for small and medium-scale enterprises and industries is an important step towards the industrialization process.

Since its creation, UNIDO has conducted technical assistance programmes for small-scale industries, including conversion of craft enterprises into modern small-scale industries. Through industrial extension services to small-scale industries, it has assisted in upgrading and promoting new industrial entrepreneurs.

As an experiment, UNIDO has gone one step further and is at present engaged in training a number of potential entrepreneurs in an African country in the gold and silver-smith skills, using local raw materials (semi-precious stones) and reviving the skills in this trade which did exist years before and were dormant. So far the results are

promising, and it is envisaged that after training, one or two groups of trainees will be able to operate their own workshop, use the locally available raw material and not only sell locally but also export their products.

Another very important role small-scale industries, handicrafts and artisans can play is in helping to decentralize industries. Many of the large-scale industries are either placed at the site of raw materials or are located in a capital city or larger cities in the country. This development is a magnet for job-seekers coming from the rural areas in order to find employment, and there are many examples in Africa and Asia where cities cannot cope any more with the influx of people from rural areas, and the cities now have slum areas with all the social and security problems connected with this development.

Using available artisans in their natural location and assisting them means creating job opportunities where the people live, and not drawing the people to major cities. These industrialists may not use the latest technologies in production and their product quality or may be below the imported quality, but they use local skills, local raw materials, produce for the local market, and in this way build up the local pride and the confidence of the rural population; they might even give ideas for help through "self-help" and, of course, by keeping the people where they are used to living, avoid difficulties with housing congestion and all the associated social problems.

Of course this development needs some support from governments or other institutions which, for instance, provide regional infrastructural support, can arrange transport facilities, supply of some raw materials, supply of seeds, or sending someone to foster and develop ideas. ○



Traditional small-scale craft industries (photo: making gloves) have long been part of Barbados's diversified industrial economy



"Base upwards" industrialization has given impetus to local skills

ACP works of art in the British Museum

"Some would have disappeared from the world if they hadn't been kept here"

**Malcolm D. McLeod,
Keeper of the Museum of Mankind**

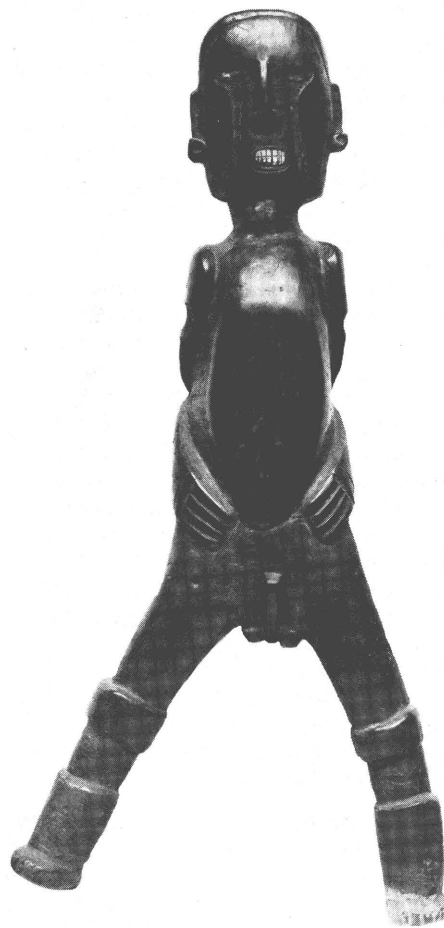
The United Kingdom's influence in the world was built not only on colonial conquest and the industrial revolution, but also on the quality of British culture and society. The capital of this land of Shakespeare, London, is still a great cultural centre in Europe and the world at large, although the days of the British Empire are over and UK industry has long lost its pre-eminent place. The British Museum is, alongside such as the Louvre (Paris) and the Metropolitan Museum (New York), one of the great international storehouses of cultural wealth, to an extent that stretches the imagination. Its Museum of Mankind contains many artistic and cultural pieces which have introduced the British public to the history and civilizations of ACP countries. In the following interview, curator Malcolm McLeod discusses these artefacts and the changing British attitude to countries whose cultural level tended to be judged, until quite recently, in terms of their knowledge of the English language and way of life.

► *What is the importance of ACP works of art in the British Museum?*

— It's very important. We have items which people regard as works of art, but we also have lots of other material which wouldn't be regarded as such, but which we regard as equally important in that it helps us to understand other cultures; it helps us to put on exhibitions which depict those other cultures and which are of interest for all sorts of scientific and other purposes. So I don't want you to get the idea that this is an art museum.

One of the things we are always trying to do is to get past European preconceptions about African, Pacific, Caribbean and North and South Ameri-

can societies. Now, one of those preconceptions is that there are certain things which are art and certain things which aren't, the choice being a matter of European taste. We think this is wrong and that this choice distorts the local cultures. We have things which are extremely beautiful and important, sculpture or metalwork, for instance. But we are always trying to get Europeans to understand more in terms of local ideas, local concepts, local beliefs. We are a museum which tries to depict other cultures as they them-



*Wooden carving of a male figure from
Jamaica*

selves would like to be depicted, as far as that's possible, and to convince people in our own society that these cultures were highly developed, sophisticated, complex and different.

► *What impact have your activities had on the British public?*

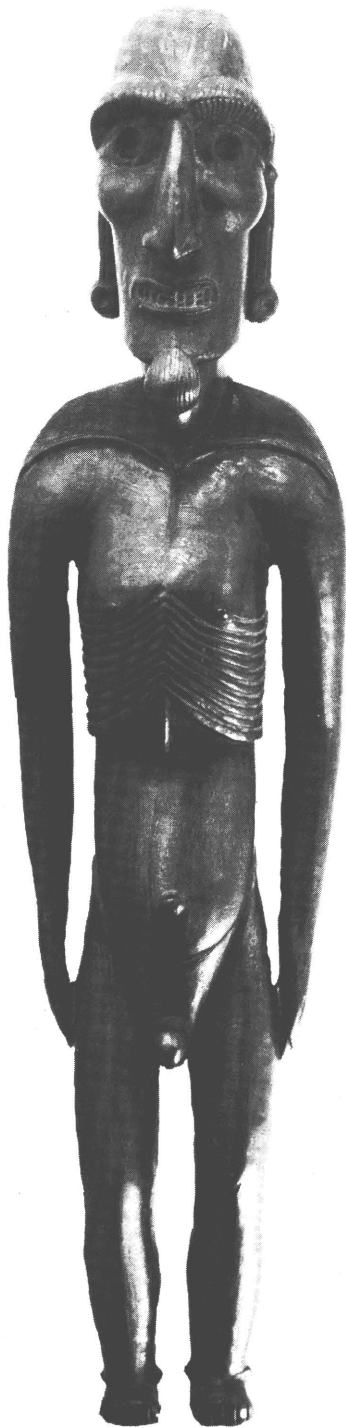
— I think the impact of our exhibitions is quite strong. For example, we have in the galleries at the moment a major exhibition on the Ashanti of Ghana. That exhibition attempts to show Ashanti society as it was at the height of its development. It has had a very strong impact on visitors. They hadn't realized that this West African kingdom was such a large, powerful, well-organized and sophisticated political unit. They hadn't understood, for example, that the Ashanti made beautiful metal castings, did superb gold work; and they hadn't understood how that society was organized. So I think it has had a considerable and beneficial impact. We've had a large programme of bringing school-children and college students in to see it. We've linked it with teaching on African history, world history, Third World development and so on.

It's also had another kind of impact, which I like very much, on people of Caribbean origin who are now British citizens. Many of them have come in and been very interested to see the African side of their heritage. It's had a big impact on Ghanaians who live in this country and on other West Africans who come in. The exhibition was set up in conjunction with various studies the museum has carried out in West Africa. It was opened by the King of Ashanti himself and many of his chiefs came over to see it. And we have had a number of other visitors coming over specifically from Ghana to see the exhibition. So we don't just have a role limited to this country.

**"We are not
presenting a simple,
reactionary view of Africa"**

► *Many of the school-children you mentioned are Africans and West Indians living in London; they are motivated by their roots or their history. How about the British people themselves, who already have another view of what is Africa, and which has not been always very positive?*

— Well, I hope the effect we have is to change that view, and make it more positive and understanding. I don't think anyone can come into one of our museums, one of our exhibitions, with



An old man...

a view of Africa which is unsympathetic and prejudiced, go through it with any degree of intelligence and not come out at the end changed. His attitudes must be changed. We are not presenting a simple, reactionary view of Africa. We are presenting something very different, and we think it does change people's attitudes. We hope it does. We're not doing it just for Africa but for the Pacific and other places, because the British Museum is concerned with showing people how other cultures—archaeological cultures which have now vanished or contem-

porary cultures—are more sophisticated than, and much different from, what they imagine if they come in with crude preconceptions that they pick up through popular newspapers, earlier schooling or whatever.

► *How many works have been returned to their countries of origin in accordance with UNESCO's recommendation?*

— A number of items have been returned to Nigeria. The British Museum returned a considerable number of Benin bronzes to Nigeria when the Nigerian Museums and Antiquity Service was being set up. A number of other requests for the return of objects have been received and are being considered. The difficulty is that there is an Act of Parliament which controls the running of the British Museum and the Act says items cannot leave the collection permanently, except in very tightly-defined circumstances. For the British Museum to return objects on demand would be to break the British law, as it is now, which controls the running of the museum. I must stress that we're not using this as a sort of wall to hide behind. We want to do everything we can to cooperate with the museums, with the antiquities and cultural services of other countries. We do everything in our power to do that as far as the law allows us.

Let me give you examples from my own department. Firstly, we have many instances of people from the museum services of other countries coming here to work and study and learn with us. We have helped train a large number of people from the museums, for example, of Brunei, the Solomon Islands, Nigeria and the Sudan—from many parts of the world. Secondly, if we continue to do research in collecting, we always carry it out with the local museum and scholarly bodies. We never export or collect something without proper, formal government permission. In many cases we work together and have joint collections. We put money into research in the countries; e.g. we've been helping finance excavations in Peru. We get nothing out of that; all the material goes to the local museums and antiquity service. So we're doing all this sort of work. On the question of restitution and return of objects, that is more complex and the whole question of the legal situation is still under discussion.

► *A while ago, the United States government decided to send back to Germany certain works of art which were taken there during World War II, because they said they are part of German consciousness. Don't you think that keeping ACP works of art here is*



and a young man, both from Easter Island

keeping this part of their culture in Europe?

— I think there are two problems. Firstly, no one denies that an item can be of enormous significance to the people involved. What I think one has to remember is that it's also important, in many cases, for those things to be accepted as part of the world's cultural heritage too. I think it is very important nowadays that people understand, say, that South American Indians or Eskimos made wonderful things, which help make people everywhere in the world realize that these cultures are important and creative. Secondly, there is a very serious problem—it is the other side of all this—which is the present-

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day smuggling, stealing and illegal exportation of works of art. Besides remembering that an African carving may be of great importance, spiritual importance, for African people and for people in the West, and in America and in India and wherever, we've got to remember that steps have to be taken by ACP countries, by West Europe and by North America to stop this illicit trade in looting, stealing and smuggling. This kind of exploitation is still continuing in many countries and can only be stopped by joint action.

► *You have already described the kind of cooperation you have with certain ACP countries. Do you also help in building up museums in those countries?*

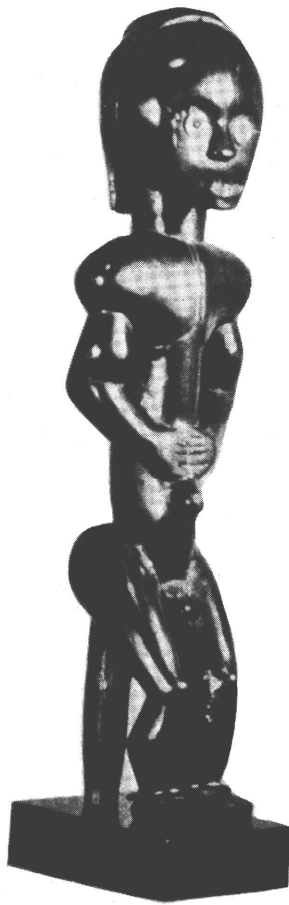
— We'd like to if we had the money to do so. Like most museums everywhere in the world, we only have a very limited amount of money for our own purposes. We don't have money to spare, I'm afraid. I wish we did, have funds to develop museum-building programmes in other countries. We have done a certain amount. For example, one of my staff was the adviser on the layout for the new museum in Brunei. We have often held long discussions with museum curators from other countries on exactly what's the right sort of museum. You learn by your mistakes and I think we've done a great deal, in conjunction with other countries, to say "right now, this is the sort of set-up we think would work best". But you've got to look at it in terms of your own country, your own materials, your own historical traditions. As far as putting actual cash into this, we just don't have the money to do it. It would be nice if we did.

A triple mission

► *What is the role of the British Museum today? Is it a centre of living culture and art, or simply a place to keep the world's works of art until they become popular?*

— We are not just a storehouse. We're not just here to hang on to things so that one day people will say "gosh, it's a good thing you got that in 1910" or whenever. We have three functions. One, we are a universal museum. We have material from most periods in human history and from most cultures, and it is in one place. This is important. We're not a London museum. We're not even a British museum, even if that's our title. We're a world museum. We see our role as world-wide. We can show to people who come to us the cultures of mankind as a whole. We can show them, this is how things were done here, this is how things were done there.

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Wooden figure, male, carved by a Fang artist (Gabon) and (below) a Nimba mask from Guinea. The caricature and rough cut are to ACP sculptors what the first sketch or blocking in are to European painters; but the former do not apply the finishing touches

BRITISH MUSEUM



Now, that is very simple. But to do that, we have two other responsibilities. Firstly, we have a scholarly responsibility to carry out research on this material, and allow other scholars access to it so that they can do research and make discoveries and increase understanding. Secondly, we are continually trying to show in our exhibitions new insights, new approaches to all sorts of cultures, whether it's Anglo-Saxons who were settled in this country, modern American artists, the Greeks and the Romans, the Asians, the people of Zimbabwe, of Central Africa, or whatever. So I think it is a living place, because people are always looking at the material, trying to understand it and how it came to be created and its meaning for the present.

So, in a sense, we are leaders of opinion. We're not saying we'll wait till this is classed as art and then we'll put it on, show. We're trying to show people, "alright, this is interesting. This is exciting. This tells us something about human beings, how they lived together, how they create things". And of course we are serving a very wide public, which makes things difficult. We are serving scholars. We are serving overseas visitors—the British Museum sometimes has a million or two million visitors from overseas. That's an enormous number of people. We're serving school-children of all sorts of backgrounds, all sorts of languages. This makes for difficulties, but I think in many ways we get the balance more or less right.

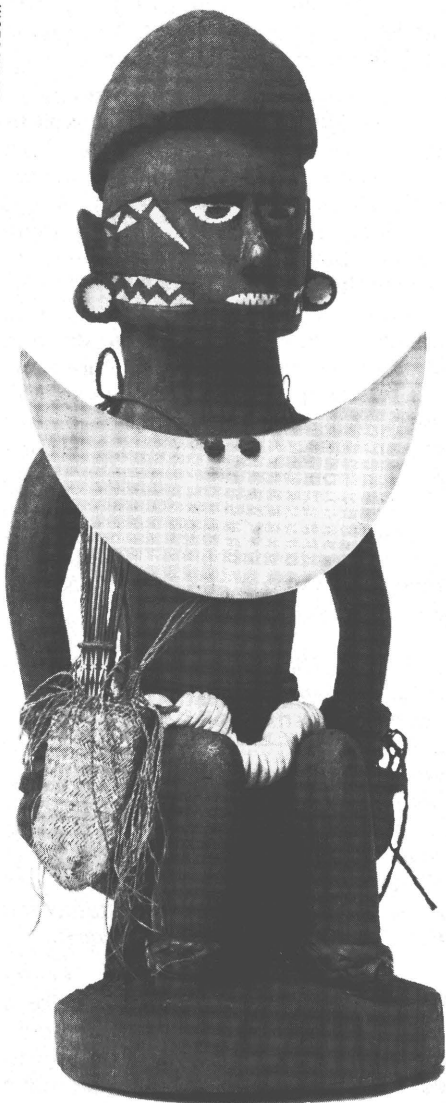
► *The Third World's cultural symbols, gathered in this museum, have been considered as belonging to "uncivilized" countries. This is an opinion which was carried around for a long period of time. I'm sure this is less true today, but there are still certain views that continue that kind of thinking. What difference do you see between an African or Pacific deified statue and the Christian cross, for instance?*

— I don't think people have thought of these as uncivilized countries for a long time, certainly not here. I emphasize this because it's very important to us. Most of us in this department have lived in other cultures. I spent four years or more in Ghana. People here have worked in Cameroon, in the Sudan, in the Pacific, North America, Belize, Ecuador, Peru, Yemen, Jordan. They have lived with people, learned their languages and been accepted—a great privilege—into their societies. And you cannot live with any other such group of people and come back and say they are uncivilized! It just isn't possible. In many cases we'd rather be among them than living in London, be-



Bark carving, a wall decoration from Papua New Guinea

BRITISH MUSEUM



Seated man (Solomon Islands)

cause many of those societies are more humane and more pleasant to be in. The scale of them is smaller. You have different sorts of problems, but there are enormous virtues among those people.

Now when it comes to the difference between, say, a Christian cross and an Easter Island figure, I don't think we

"As you know, younger generations grow up and tend to despise the ways of their fathers and their grandfathers. I think it is a tragedy that this has occurred. I think all groups, all societies, are better for knowing their roots and history. I agree entirely with attempts by local people to preserve their own traditions and to teach them to their own descendants."

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would ever say one is superior or inferior to the other because of the culture which made it. You might be able to say they treat a form or the human body differently, or they use different materials; or you think this is a better piece for artistic reasons, better in its own terms. There are bad and good sculptors making crosses or African carving.

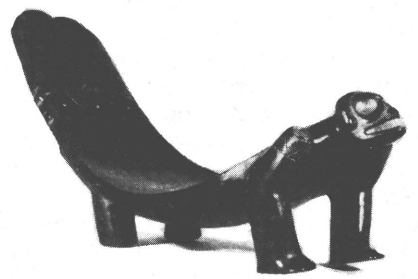
What we're trying to do all the time is to show these things to people and say: look, try and understand the feelings, the attitudes behind them, that gave rise to them. Try and understand Christianity in a more objective way. Try and understand the religion of South American Indians in a more objective way. And I think our attitude is to try to treat them with equal reverence and an equal spirit of enquiry.

► *In your view, what would be the reaction of European people today if they had to go to foreign countries to find out, or to study, their roots?*

— I think they actually do this, of course. If you take British society, it is made up to a very large degree of immigrants. We're practically all immigrants in this country. Some are more recent, some are older immigrants. My own grandparents, for example, were Scottish peasants who were forced to go to Canada. They were driven off the land in the 19th century. My father is Canadian. My mother was from England but her family were immigrants from the continent, and so it goes on. To understand our cultural links, we have to go abroad in many cases.

But perhaps the question is this: is it unjust that an African who wants to know about his African culture has to come to London to see it? I think that is undoubtedly a bad thing. But let me give you an example, again from my own experience, which is our present Ashanti exhibition. Some of the younger Ashanti who came here said they had not seen these things in their own culture, in their country. It wasn't until they came to London that they saw them. But the point is, these things are still in Ashanti country but the people

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Carved wooden seat (St Domingo): human and animal figures are predominant in ACP art

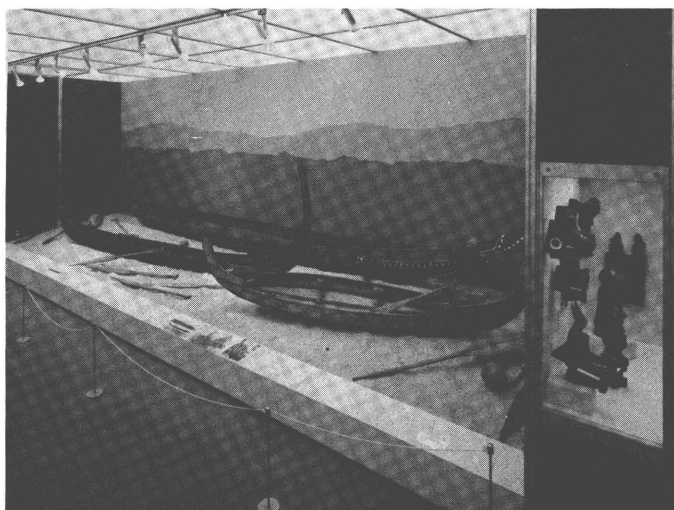


Yoruba Egungun mask (Nigeria), an exercise in imagination

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themselves haven't felt the need to put them in a museum or a cultural centre, things such as old carvings and old stools. Many countries in Africa, the Pacific and the Caribbean have changed very rapidly in the last 30 or 40 years. They have been concentrating on more immediate things like building roads, schools and hospitals, and inevitably traditional culture sometimes gets rather overlooked, or people may feel positively that they don't want it for a while. I think this is an appalling thing but it does happen. As you know, younger generations grow up and tend to despise the ways of their fathers and their grandfathers. I think it is a tragedy that this has occurred. I think all groups, all societies, are better for knowing their roots and history. I agree entirely with attempts by local people to preserve their own traditions and to teach them to their own

(See page 88)



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Solomon Island canoes on display in the British Museum; fabrics dyed with indigo (Yoruba work from Nigeria) and their uses in West Africa (below, in Nigeria and Sierra Leone)



Doc. FESTAC 77



Doc. FESTAC 77



Doc. FESTAC 77



Bird and snake (Ashanti, Ghana): the bird supposedly borrowed money from the snake and flew off without repaying it only to be bitten by the snake at a later meeting (moral: you can't win 'em all). Right, a canoe figurehead from Tahiti: such carvings have particular significance in the voyages of seafaring peoples

descendants. Of course, this is often very difficult.

► So this museum also acts today as a place of protection for a certain part of ACP culture?

— That makes us sound rather paternal and ex-colonial. We're not. What we do say is that what we've got, we think is valuable. It's not just valuable for us or for the cultures which it came from. It's valuable for all of mankind. And we are determined to preserve it and transmit it to people in the future by, if you like, a mixture of good fortune and accidents of history. We have things which, if they hadn't been kept here, would have disappeared from the world. Those things are important for all of us and it is our duty to continue to preserve them, not just for us, but for mankind as a whole.



The National Theatre in Lagos (Nigeria)

If the arts need to be celebrated, they also need to be protected

I think there are obvious problems with ACP countries who haven't got examples of things from their own past. We do understand them and we are deeply sympathetic towards them. We couldn't do our job if we weren't. But we do see that we have a function, to preserve things which otherwise would have vanished. We put an enormous amount of effort into this, let's be quite clear. We have extremely fine storage

and conservation facilities. The aim is to preserve the stuff and always make it available for anyone, from anywhere, who had a serious interest and wants to see and study it. We recognize no boundaries in that if someone comes from Siberia or North America, or Africa or the Pacific, and wants to see our stuff, he sees it. And that's it. ○

Interview by
LUCIEN PAGNI

The state of art in Cameroon today

by Roland BRETON (*)

Art in Cameroon, as in many other countries of Africa, declined sharply earlier this century under the shock of colonialism; but, since independence, there has been a period of slow, hesitant revival.

Cameroon, at the frontiers of the Bantu and West African world, the dense forest, the savanna and the Sahel, had many kinds of traditional art. In the south there were:

- ritual art, with statues of ancestors, the masks, costumes and accessories of religious dances and music when songs and dances were at the centre of all the traditional ceremonies;
- domestic art, with its many tools, pieces of furniture, pots, jewelry, other decorations and even architecture;
- court art in some fairly restricted geographical areas, displaying the attributes of power, thrones, parasols and decorative items.

The destructive role of the Christian missions

By the beginning of the 20th century, this art had practically disappeared under the pressure of the Christian missions, the colonial administration and international trade. The Christian missions systematically clamped down on any form of ritual art, destroying any supposedly pagan religious object. To usurp traditional beliefs, all the associative and collective structures, all the feasts and initiation ceremonies were done away with, all the objects used on these occasions were burned and all the practices, the singing and the dancing, outlawed. And there was no room for anyone who refused to comply. In most cases, the colonial authorities, French, German and British, backed up the missions with a strong secular arm: thousands of statues, masks and so-called slave bracelets were destroyed; priests on veritable punitive expeditions demolished even the smallest of instruments, the tomtoms and the balaphons, heard in the forest. Thus were all artists and all creative spirits quenched.

In this way, all African art objects were seen by the Africans themselves to be primitive things, diabolical crea-

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Top of a ceremonial "ancestor's voice" clock from Tikar country

tions to be condemned. A whole culture founded on sculpture, dance and rhythm was methodically wiped out, eclipsed, ridiculed and rendered worthless, and rare were the attempts at observing, understanding and analysing this culture. At the same time, there were one or two enlightened priests who took an interest in African art and language, but they tended to be isolated, decried and suspected of heresy.

So, gradually, the Africans were forced to turn away from their ancestral culture and to forget it. This was particularly true of south Cameroon where missions from Douala and other ports first set up. And the social structures, the stateless societies with no organized power that the sociologists call headless or segmentary, the villages without chiefs or with chiefs with no real power, could only put up token resistance and the missions were able to set up with no competition of any kind. So art disappeared from many tribes on the coast and in the interior, from the Douala, Bassa, Boulou, Ewon (Yaoundé), Eton and so on, to the point where there is now no trace of the way the people lived, either in museums or in the mind and memory of the people

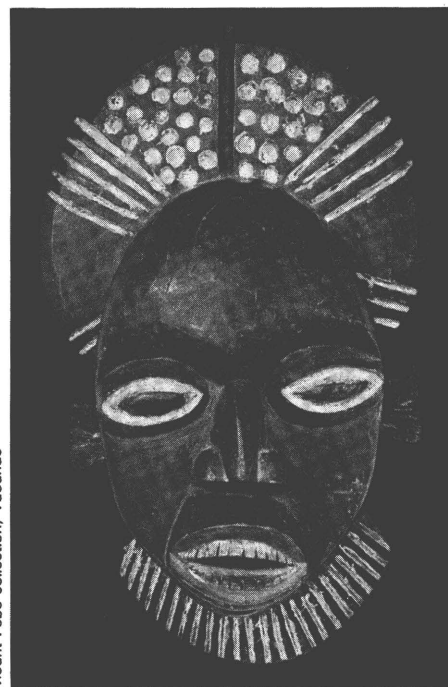
themselves. It was all completely wiped out.

The things that escaped owed their lives to a handful of more enlightened and more curious colonizers (Zenker, the founder of Yaoundé, was one) who set up the first collections that were then sent to German museums, such as the one in Hamburg. Now if the Ewondo or the Eton want to see what their grandparents' art was like, they have to go to Germany.

More resistant social structures in the west

This tended to be the case through southern, central and eastern Cameroon. But a brake was put on the destructive powers of evangelism in the west by the more resistant social structures there. Here there were many highly organized chiefdoms, among the Bamileke, for example, and in the rest of the grassfields, which were subsequently colonized by the British; and there were even kingdoms, like the Bamoun. In these areas, the church had to respect the hierarchy, edge its way round without making an unresisted frontal attack on the existing social, political and religious set up.

These kingdoms and chiefdoms, with their civil and religious dignitaries, remained and art was able to survive, to perform its function and to get the backing of the institutions that supported it. So all was not lost and people continued to use, create and re-



Helmet mask from the western grassfield



Bamileke statue

Photo Guy Maurette

spect traditional works of art. Today, visitors to Cameroon may get the idea that the west is the only place where art ever existed, which is wrong. Art existed all over the south. It has simply been wiped out elsewhere. However, the impression is difficult to dislodge, as almost all art and craft and all museum exhibits do, in fact, come from the west.

First the works and then the artists

It would be wrong to exaggerate the resistance and ability to survive that enabled many things to get through the period of frantic evangelization. Ritual art, like craft and the art of the court, has still degenerated and fallen into the trap of producing stereotyped series of objects more for sale abroad than for use at home. The pressure of the sur-

rounding industrial society, city life, mass culture, styles and fashions from Europe and America and so on is such that the religious and artistic forms of the traditional way of life are as stifled and bound for extinction as the ancestral forms of economic and social life.

The church opened breaches in the old society and through them came flooding the ways of living, thinking, feeling and consuming of the modern international society, which provides a dominant and prestigious model that has no real rival. The church replaced the wooden masks and carvings with holy pictures and plaster statues, the world market found it even easier to replace traditional objects with all the bazaar and supermarket goods with which we are now inundated, and the mass media found it just as easy to supplant the wisdom, the oral traditions and the rites of the villages.

Representational art was the great loser in this unfair, unequal competition. The artists disappeared after their work. Inspiration dried up and creation ceased.

Resistance and revival

But there is one field where the African soul resisted: in music, song and dance and in rhythm. Neither the church nor the administrators could stop the Africans dancing, making their stringed instruments and their drums and expressing themselves on them. Music resisted in Africa as it resisted among the Africans who were deported to America—where it emerged as jazz. In music, practice and creativity stayed alive and Africans carried on dancing, singing and creating rhythm.

With the drive against colonialism, there also emerged a fighting literature, living satirical drama, committed art which raised the spirits of a whole generation.

And thanks to men like Senegal's Leopold Sedar Senghor and Alioune Diop, there was a general awakening to negritude and negro art. Festivals of black and negro art were organized in Dakar (1966) and Lagos (1977) and these were opportunities for people from all over Africa to show the real worth of African art forms. In Cameroon, for example, a negro art workshop was set up thanks to the university professor Father Mveng. And schools of fine art and theatre, ballet and film companies sprang up everywhere.

It was a real African art revival. It stretched even to the church, which admitted, not without some reticence, African-style ornaments, traditional instruments and ancestral rhythms—but

obstinately refused to allow dance (at least the Roman Catholics did).

Brakes on revival at home and abroad

This revival of art, both sacred and lay, is held back in two ways. At home, the creativity of African artists is paralysed by their lack of the systematic knowledge and profound analysis of African traditions which would be vital for a true return to their roots. International models prevail among the young artists and their largely foreign public. And art does not get the encouragement or stimulus of state drives to develop culture. African priorities are elsewhere and the artists are left to



Seated maternity figure, a large bronze piece from Tikar country

Mount Fébé collection, Yaoundé

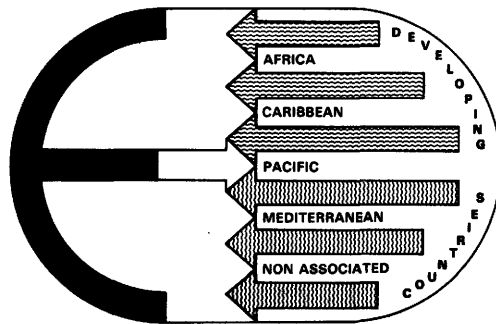
Photo Guy Maurette

their own devices. And they are weak. The inspiration behind the independence generation seems lacking—outside the criticism of a certain kind of daily life that is quick to turn to boulevard theatre. Authors come up against a lot of taboos and are unable to get involved in any social struggles. Development, conceived as a purely economic thing, makes far too little call on them. Campaigns do not seem to want pens, pencils, brushes or engraving tools. But it is still possible to sing and dance and create new rhythms.

Can art, which espouses original traditions but remains the victim of what is now a secular trauma, emerge from the depths, from the rural masses, for example? Only the future will tell. ○

R.B.

Operational summary of EEC-financed development schemes



OPERATIONAL SUMMARY No. 11 – July 1982

(position as of 20 June 1982)

The following information is aimed at showing the state of progress of EEC development schemes prior to their implementation. It is set out as follows:

Geographical breakdown

The summary is divided into three groups of countries, corresponding to the main aspects of Community development policy:

- the ACP countries (Africa, the Caribbean and the Pacific), which signed the multilateral conventions of Lomé I (28 February 1975) and Lomé II (31 October 1979), plus the OCT (overseas countries and territories) of certain member states of the EEC, which get the same type of aid as the ACP countries;
- the Mediterranean countries (Maghreb and Mashraq), which signed cooperation agreements with the EEC in 1976 and 1977;
- the non-associated developing countries of Asia and Latin America, beneficiaries since 1976 of annual aid programmes.

The information within each of these groups is given by recipient country (in alphabetical order).

Note

As the information provided is subject to modification in line with the development aims and priorities of the recipient country, or with the conditions laid down by the authorities empowered to take financial decisions, the EEC is in no way bound by this summary, which is for information only.

Information given

The following details will usually be given for each development scheme:

- the title of the project;
- the administrative body responsible for it;
- the estimated sum involved (prior to financing decision) or the amount actually provided (post financing decision);
- a brief description of projects envisaged (construction work, supplies of equipment, technical assistance, etc.);
- any methods of implementation (international invitations to tender, for example);
- the stage the project has reached (identification, appraisal, submission for financing, financing decision, ready for implementation).

Main abbreviations

Resp. Auth.: Responsible Authority
Int. tender: International invitation to tender
Acc. tender: Invitation to tender (accelerated procedure)
Restr. tender: Restricted invitation to tender
TA: Technical assistance
EDF: European Development Fund
mECU: Million European currency units

Correspondance about this operational summary can be sent directly to:

M. Franco Cupini
Directorate General for Development
Commission of the European Communities (B8/73)
200, Rue de la Loi
B-1049 Brussels

who will pass requests for information to the services in charge of projects.

ACP STATES

BAHAMAS

Food technology laboratory. Resp. Auth.: Ministry of Agriculture and Fisheries, Nassau. 0,800 mECU. Establishment of first food technology laboratory in the Bahamas. Gross area 520 m² consisting of a chemical and microbiological laboratory, pilot processing plant, store rooms and offices. Building construction: direct agreement. Equipment and fittings: int. tender. TA: two food technologists specialist in processing and in standards and quality control. Contracts: in '83. Project in execution. 4th EDF.

Primary Health Centres. Resp. Auth.: Ministry of Health. Estimated cost 0.436 mECU. EDF 0.200 mECU. Construction of 3 small centres on the islands Grand Bahama, Eleuthera and Exuma. Date foreseen for financial decision July '82. 5th EDF.

BARBADOS

Oistins fisheries project. Resp. Auth.: Ministry of Agriculture. EDF 0.950 mECU. Local 0.450 mECU. Construction of the western complex of the existing fish market, jetty construction, erection of a fish-handling centre, sellers' stalls, shops, 80-vehicle car park and a boat repair yard. Work contracts already awarded. Equipment: int. tender in several lots in '82. Minor equipment: restr. tender or direct agreement in '82. 4th EDF.

BENIN

Djougou-Porga road. Resp. Auth.: Ministère des Travaux Publics. Intermittent road improvements over 180 km. Economic study: SEDES Consultant (F). Technical study: BELLER Consultant (D). 4th EDF.

Dassa-Parakou road. Resp. Auth.: Ministère des Travaux Publics. 0.7 mECU. Reinforcement and asphaltting of the road (210 km). Economic study: SEDES Consultant (F). Technical study to be done: restr. tender after prequalification. 4th EDF. Works 5th EDF.

Upgrading of health service infrastructure in Porto Novo Hospital. Resp. Auth.: Ministère de la Santé Publique. Porto Novo: renovation and construction of the hospital building and equipment. New technical and architectural studies to be prepared. Short list for new studies will be done in 3rd quarter '82. 4th EDF.

Parakou polytechnical complex. Resp. Auth.: Ministère de l'Enseignement Moyen, Général, Technique et Professionnel. Total estimated cost 6.9 mECU. Construction of 8 000 m² of pedagogical and administrative buildings and hostels. Supplies and equipment. Technical and architectural study: Arch. VINOUE (Local). Project on appraisal. Date foreseen for financial decision 1st half 83. 4th EDF.

Cotonou maternity hospital. Resp. Auth.: Ministère de la Santé Publique. ±1 mECU. Works: Acc. tender. Equipments: int. tender in '82 or '83. Date fore-

seen for financial decision: 4th quarter '82. 4th EDF.

Continuation and extension of fishery development project. Resp. Auth.: Ministère des Fermes d'Etat, de l'Elevage et de la Pêche. Estimated cost: ±2.5 mECU. Date foreseen for financial decision, 1st half 82, 5th EDF.

Livestock development in the Borgou region. Resp. Auth.: Ministère des Fermes d'Etat, de l'Elevage et de la Pêche. Numerical and stabilizing cattle improvement for meat production increase. Study on hand: SCET International (F). Project stage: identification. 5th EDF.

Geological mapping and mining research between 9th parallel and Ocean. Resp. Auth.: Ministère de l'Industrie et de l'Artisanat. National mineral resources development. Drowning up a geological chart, surveys, supplies. Project stage: identification. 5th EDF.

Rural Hydraulics. Resp. Auth.: Ministère de la Santé Publique and Ministère des Travaux Publics. Estimated cost 4.5 mECU. Water points. Establishing a maintenance service. Nationals training. Works, supplies and T.A. Date foreseen for financial decision april '82. Project on appraisal. 5th EDF.

BOTSWANA

Poultry-farming development project. Resp. Auth.: Ministry of Agriculture. 0.750 mECU. Supply of equipment and possibilities for T.A. Date financial decision: January '82. 5th EDF.

BURUNDI

Consolidation of tea production. Resp. Auth.: Ministère du Plan. 8.9 mECU. To increase productivity and to improve quality production of tea projects previously financed. TA foreseen for 6 years, '81 to '86: A.H.T. (D). Crop inputs: int. tender '82 to '84. 4th EDF.

Institut Universitaire de Sciences de l'Education (IUSE). Resp. Auth.: Ministère de l'Education Nationale — 0.7 mECU. Construction and equipment of educational buildings (general teaching classes, laboratories, workshops). Architectural and technical studies: TETRA Consultants (Lux). Evaluation study; DURIAU (B). Project on appraisal. 4th EDF.

Rural development of East Mpanda. Resp. Auth.: Ministère de l'Agriculture. Development of 5 950 ha of land — irrigation, construction of a road network, socio-economic infrastructure, for a population of 5 320 families (of which 3 835 are to be installed). Duration 7 years. Estimate 30.8 mECU. Cofinanced project. Foreseen funding: IFAD 10.5 mECU — Local 7.0 mECU — AFDF 6.9 mECU — EDF 4.3 mECU — OPEC 1.5 mECU — PAM 0.6 mECU. Project stage: identification. 5th EDF.

High altitude foodcrop production. Resp. Auth.: Ministère de l'Agriculture. First phase (4 years), estimate 8.3 mECU. Cofi-

nanced project. Production of selected seeds, their distribution and commercialization of surplus products, fertilizer and planthealth products, training. Foreseen funding: Local 0.4 mECU — USAID 4.1 mECU — EDF 3.8 mECU. Int. tender 1st quarter '83. T.A.: short-list, already drawn up. Project in execution. 5th EDF.

Livestock development project. Resp. Auth.: Ministère de l'Agriculture. Estimated Cost: ±1 mECU. Supply of equipment and T.A. Study on hand: SEDES Consultant (F). Date foreseen for financial decision: 1st half '82. 4th EDF.

Remera tea factory. Resp. Auth.: Ministère du Plan. Tea factory building for 600-700 tons/year. Project stage: identification. 5th EDF.

Ngozi-Kayanza electricity supply. Resp. Auth.: REGIDESO. Estimated cost ±2 mECU. Construction of electric lines. Supplies: int. tender, 2nd half '82. Project on appraisal. 4th EDF.

Tora region electricity supply. Resp. Auth.: REGIDESO. Estimated Cost ±2 mECU. Construction of medium voltage electric lines. Study on hand by Carlo Lotti: (I). 4th EDF. Project stage: identification. 5th EDF.

Bujumbura naval ship yard. Resp. Auth.: Ministère des Transports. Study on hand by I.P.G. (D). 4th EDF.

Rwegura. Hydro-electric power station. Resp. Auth.: Ministère de l'Energie des Mines et des T.P. Estimated total cost 71 mECU. EDF part estimated at ±8 mECU. Foreseen cofundings with KFW (D), CCCE (F), BAD. EDF part for electromechanical equipment. Prequalification foreseen for 1st half '82. Int. tender in 2nd half '82. Project on appraisal. 5th EDF.

Kitaba-Gihofi road. Resp. Auth.: Ministère des Travaux Publics. Estimated cost 9 mECU. Asphaltting of the road. 28.5 km. Project on appraisal. 5th EDF.

CAMEROON

Douala-Yaoundé road. Resp. Auth.: Ministère de l'Equipement. Construction of a modern road and new bridge (±311 m) over Dibamba-river. Estimated cost: 220 mECU. Cofinancings: Af.D.B. BADEA, FRANCE, EDF, NEDERLAND, KOWEIT, IDB, WORLD BANK, CANADA. Local. EDF: part for the bridge. Supervision of work financed by non EDF donors. Works: int. tender on 3rd quarter '82. 4th and 5th EDF. Project on appraisal.

Rural development in the North-West Province. Resp. Auth.: Ministry of Agriculture. Cofinanced project. Increase of production of agricultural foodstuffs, improvement for professional training of staff of the extension service, repairing regional road network. Funding. EDF 8.92 mECU. Works: direct agreement. after acc. tender. Supplies: int. tender and direct agreement. T.A.: Agrar und Hydrotechnik (D). Project in execution. 4th EDF.

Transcam — realignment of Eseka-Ma-loume railway. Resp. Auth.: Office des Chemins de Fer Transcamerounais (OCFT). Geotechnical study: Coyne et Belier (F). 4th EDF. Works, 5th EDF with cofinancing. Estimated cost: ±86 mECU. Works: int. tender with prequalification foreseen, 4th quarter '82.

Rural development in the Benoué upper valley. Resp. Auth.: Ministère de l'Agriculture and Ministère de l'Urbanisme et de l'Habitat. (Mission de développement de la Benoué - Garoua). Estimated total cost 22.4 mECU. EDF 12.888 mECU, France 1 mECU. Local 7 mECU. Strengthening, continuation and extension current operations. T.A.: Short-list already drawn up. Supplies: int. tender foreseen end '82 or beginning '83. Date foreseen for financial decision July '82. 5th EDF.

Rural development in Logone and Chari departments. Resp. Auth.: Ministère de l'Agriculture. (SEMRY). Continuation and extension current operation, study on hand: Hydroplan (D) - 5th EDF.

Trade promotion programme. Resp. Auth.: C.N.C.E. 0.650 mECU. Organisation and improvement of the production. T.A. to the C.N.C.E. Date foreseen for financial decision June '82. 5th EDF.

CAPE VERDE

Sal international airport improvement. Resp. Auth.: Ministère des Transports et Communications. Technical study financed by Italy. Partial financing envisaged. Project stage: identification. 5th EDF.

Underground water research in the Praia region. Resp. Auth.: Secretariat du Plan. Estimated cost ±1 mECU. Study: Administration. Date foreseen for financial decision, 4th quarter '82. Works by direct labour 5th EDF.

Praia water supply and sewerage. Resp. Auth.: Secretariat au Plan. Estimated cost ±4.5 mECU. Study on hand: definition portion of works to execute and definition management structure. Bureau W.P.W. (D). Project on appraisal. Date foreseen for financial decision, 4th quarter '82. 5th EDF.

Civil works for laboratory construction. Resp. Auth.: Secretariat au Plan. Estimated cost 0.066 mECU. Construction of a laboratory for soil and rock mechanics in St. Jorge. Date foreseen for financial decision 4th quarter '82. 4th EDF.

Cooperative development. Resp. Auth.: Secretariat on Plan. Estimated cost 0.347 mECU. EDF 0.310 mECU. Works, equipment and T.A.: training. Project on appraisal 5th EDF.

CENTRAL AFRICAN REPUBLIC

Renovation and equipment of Lycée Technique de Bangui. Resp. Auth.: Ministère de l'Education. 0.500 mECU. Supply of equipment and renovation works. Studies: O.R.T. (UK). Date foreseen for financial decision: 4th quarter '82. 5th EDF.

College of Education in Bangui (Lycée d'application de l'E.N.S.) Resp. Auth.: Ministère de l'Education. Estimated total cost 1 mECU. Building and equipment of the school. Study: GAMMA ARCH (F). Date foreseen for financial decision, 4th quarter '82. 5th EDF.

Bridge building on RN3 and RN2. Resp. Auth.: Ministère des Travaux Publics. 9.250 mECU. Building and strengthening of bridges. Works: int. tender launched in February '82. Date financial decision February '82. Supervision of works: short-list not yet drawn up. 5th EDF.

Damara-Sibut Road. Resp. Auth.: Ministère de Travaux Publics. Repairing and maintenance (±109 kms). Works: int. tender conditional upon provisional finance launched end of March '82. Date foreseen for financial decision, 3rd quarter '82. 5th EDF.

Rural development in the coffee region. Resp. Auth.: Ministère de l'Agriculture. (AD-ECAF). 10 mECU. Continuation current operations. Date foreseen for financial decision September-October '82. 5th EDF.

Livestock development at Ouaka and Basse Kotto. Resp. Auth.: Ministère de l'Agriculture et de l'élevage. 3.4 mECU. Works, supply of: vehicles, equipment, furniture and T.A. Works, by direct labour, supplies: int. tender. T.A.: direct agreement. Date foreseen for financial decision, 4th quarter '82. 5th EDF.

Rural development in the cotton area. Resp. Auth.: Ministère de l'Agriculture et de l'Élevage. Cofinanced project with I.D.A. and France. Study done with I.D.A. funding. Project evaluation on the way. Project stage: identification. 5th EDF.

CHAD

Agricultural and rural interventions in the sudan area. Continuation and strengthening existing operations. Project stage: identification. 5th EDF.

COMOROS

Economical and technical study to assess harbour infrastructure in Grande Comore and in Mohéli. Resp. Auth.: Ministère des Travaux Publics. NEI-D.H.V. (NL). Project on appraisal. 5th EDF.

Maize development project. Resp. Auth.: Ministère de l'Agriculture. Estimated Cost 1.5 mECU. Works, supplies and T.A. Project on appraisal. 5th EDF.

Fomboni water supply. Resp. Auth.: Ministère du Plan. 0.700 mECU. Renovation of installation and drinking water network in the chef-lieu of Moheli island. Project on appraisal. 5th EDF.

CONGO

Sibiti-Bihoua-Loudima Road. Resp. Auth.: Ministère des Travaux Publics. Estimated Cost: 20 mECU. Reconstruction of the section Sibiti-Bihoua (20 km) and construction of a new road Bihoua-Loudima (57 km). Technical study and tender dos-

sier: B.C.E.O.M. (F). Projet on appraisal. (Prequalification for Loudima-Indo launched January '82). Int. tender foreseen April-May '82. Supervision of works: short-list not yet drawn up.

Continuation to improve sanitation of the M' FOA river in Brazzaville. Resp. Auth.: Ministère du Plan. 2.5 mECU. Construction of a concrete bed and a service gravel-road. T.A. Works: int. tender, launched end of March '82. T.A.: direct agreement. Project in execution. 5th EDF.

Sanitary and social actions. Resp. Auth.: Ministère de la Santé Publique. Study and construction of the Ouessou hospital and construction of the Ecole de formation paramédicale et médico-sociale J.J. Loukabou (Brazzaville). Appraisal of the project after sanitary programming and technical studies. Project stage: identification. 5th EDF.

DJIBOUTI

Support to the livestock service for anti-ticks baths network settlement. Resp. Auth.: Ministère de l'Agriculture. 1.123 mECU. Project on appraisal. 5th EDF.

Medical equipment for the Peltier Hospital. Resp. Auth.: Ministère de la Santé. 0.632 mECU. Supply and transport. Project on appraisal. 5th EDF.

Djibouti water supply. Resp. Auth.: Ministère du Plan. 1 mECU. Improvement of production (EDF part). Pump station rehabilitation and reinstatement of the installations' management. (CCCE part). Works and supplies. Date foreseen for financial decision 2nd half '82. 5th EDF.

DOMINICA

Reinstatement of Pont Casse-Castle Bruce Road — Surfacing of 2 coastal roads East and West. Resp. Auth.: Public Works Department. Estimated cost 2.5 mECU. Study on the way: Nicolas O'Dwyer (Irl.) Project stage: identification. 5th EDF.

ETHIOPIA

Health project. Resp. Auth.: Ministry of Health. 8.3 mECU. Construction and equipping of two rural hospitals and a school for laboratory technicians in Addis Ababa plus the supply of laboratory equipment to the Central Laboratory in Addis Ababa. Works: int. tender on hand, launched again, conditional upon provisional finance. 4th EDF.

Cotombie — Combolcha power line. Resp. Auth.: Ministry of National Resources and Energy. Construction of a 300 km 135 KV power line. Feasibility study: ACRES (Canada). Study: final design and tender documents: directly by GOE and LAHMEYER, Consultant (D). Int. tender launched end of March '82. Project in execution. 4th EDF.

Fishery Development. Resp. Auth.: Fisheries Development and Marketing Corporation. 2.078 mECU. EDF 1.513 mECU, Local 0.565 mECU. Supply of equipments, facilities and T.A. Supplies: int. tender in '81

and '82. T.A.: GOPA (D). Project in execution. 4th EDF.

Amartis river diversion. Resp. Auth.: E.E.L.P.A. Ethiopian Electrical Power Authority. Estimated cost: 10 mECU. Dam and tunnel. Study and T.A. Works: int. tender in '82. Project on appraisal. 5th EDF.

Electrical tariffication study. Resp. Auth.: E.E.L.P.A. Short-list already drawn up. Project on appraisal. 5th EDF.

Addis-Ababa Water Supply. Resp. Auth.: Addis-Ababa Water and Sewerage Authority (AAWSA). Estimation: ± 53 mECU. Works, supplies and T.A. Int. tenders for works and supplies launched end of march '82. Project in execution. 5th EDF.

Coffee improvement (phase 2). Resp. Auth.: Ministry of Coffee and Tea Development. 27.2 mECU. Works, supplies and T.A.: Short-list already drawn-up. Int. tender for fertilizer, insecticides and equipment in '82-'83. 5th EDF.

FIJI

Central Division Roads. Resp. Auth.: Government of Fiji. Construction of a modern earth road. Estimated cost 2 mECU. Project stage: identification. 5th EDF.

GABON

Reafforestation (improvement of the reafforestation brigade's activity). Resp. Auth.: Ministère de l'Agriculture. EDF part for renewing and completing equipment. Project stage: identification. Study: C.T.F.T. (F). 5th EDF.

Hevea-cultivation in Mitzic. (HEVEGAB) Resp. Auth.: Ministère de l'Agriculture. Cofinanced project. CCCE - BAD - EDF - FAC and Local. Estimated cost ± 50 mECU. EDF part 3.63 mECU. Plantation of 3,300 ha heveas. Supply of equipment (lorries, tractors machines). Project in execution. 5th EDF.

Mining and geological inventory in 3 sections. Resp. Auth.: Ministère des Mines et du Pétrole. Direction Générale Mines et Géologie. Section 1: Radar survey done. Section 2: Aerial-geophysical survey to be done. (Terms and conditions EDF-GABON cofinancing established). Section 3. Soil prospection (FAC-GABON). EDF part 5th EDF, 3.212 mECU. Date foreseen for financial decision July '82. 5th EDF.

Small-fishery centre in Owendo. Resp. Auth.: Ministère de l'Agriculture, des Eaux et Forêts et du Développement Rural. Estimated cost 1.700 mECU. Infrastructure for handling facilities for boats and fish products, marketing and management. Technical and economical study: Hydroconsult (I). Works and supplies: int. tender, 3rd quarter '82. Supervision of works, direct agreement on 1st quarter '83. Date foreseen for financial decision 4th quarter '82. 5th EDF.

GAMBIA

Brikama College, phase II. Resp. Auth.: Ministry of Works and Communications. 1.925 mECU. Construction and equipment

of academic and residential buildings. Works by mutual agreement. Equipment for phase II: int. tender, 1st half 1982. 4th EDF.

Banjul sewerage and drainage project. Resp. Auth.: Ministry of Works. Estimated Cost: ± 15 mECU. Cofinancings: BAD/FAD 7.3 mECU, EDF 3.5 mECU, KFW (F.R.G.) 3.3 mECU, Local 0.9 mECU. Construction of a sewerage and drainage network, 2 pumping stations. T.A. and training. T.A.: short-list already drawn up. Works: int. tender, 1st half 1982. Financing decision for EDF: May '81. 5th EDF.

Rural vocational training - phase 2. Estimated cost 0.500 mECU. Supply of equipment for 32 training-workshop. Project on appraisal. 5th EDF.

Rural vocational training, phase 2. Resp. Auth.: National training board. 0.500 mECU. Supply of pedagogical equipment. Date foreseen for financial decision 3rd quarter '82. 5th EDF.

GHANA

Central and Accra Regions Rural Integrated Programme (CARRIP). Resp. Auth.: Ministry of Finance and Economic Planning. Prefeasibility study for potential projects within the two regions, with the aim of improving the food situation in Accra and other coastal towns. Study: rehabilitation irrigation project: HEDELSKABET (DK) 4th EDF. Study: 3 integrated projects: short-list already drawn up. 5th EDF.

Oil palm development in Ghana. Resp. Auth.: Ministry of Finance and Economic Planning. Study of state farms oil palm plantations as a basis for a possible rehabilitation and development programme (Pretsea excepted). Consultant: Harrison Fleming (UK). 4th EDF.

Aveyne Livestock Development. Resp. Auth.: Ministry of Agriculture. 3.2 mECU. Works, supply of vehicles and equipment, T.A. Date financial decision May '82. 5th EDF.

GRENADA

Eastern Main Road Rehabilitation. Resp. Auth.: Ministry of Public Works. 2.5 mECU. EDF 1.440 mECU, Local 1.060 mECU. Geotechnical study: Geoproggett Consultant (I). Works: Contracts already awarded. Supply: equipment for public works, int. tender in '82. 4th EDF.

Phase 2. Repairing and strengthening of a section of the circular road. Estimated cost 1.350 mECU. Project on appraisal. 5th EDF.

Hillsborough Jetty. Resp. Auth.: Ministry of Public Works. 0.357 mECU. Construction of a jetty for goods and passenger handling. Date financial decision May '82. 5th EDF.

GUINEA

Land development in Kankan and Labé regions. Resp. Auth.: Ministère de l'Agriculture et des F.A.P.A. 2.5 mECU. 1st phase. Cultivation of 1 000 ha of hydro-agricultural

land by rural development brigades. Works, supplies, furnitures and vehicles and T.A. Work and supply: int. tender and acc. tender or direct agreement. T.A.: CEDRAT (F) and Brigade d'aménagement rural. Project in execution. 4th EDF.

2nd phase. Estimated cost: 5 mECU. Hydro-agricultural land improvement by controlled flooding. Carrying out of plan: Bureau EUROCONSULT (N). Project on appraisal. 5th EDF.

Renovation and extension of the SO-GUIPLAST plastics factory. Resp. Auth.: Government of Guinea. 13 mECU. Fundings: EDF 5.8 mECU, Iraq (E.I.F.D.) 4.7 mECU, Local 2.5 mECU. Engineering, training, provision of services, renovation work, supplies and installation of auxiliary equipment: int. tender launched. Supply and installation of plastics production equipment: int. tender following E.I.F.D. regulations, in '82. 4th EDF.

Dairying in Guinea. Resp. Auth.: Premier ministre. Dairying improvement for population nourishment. Study in progress: pasteurized milk reconstitution unit by Danske Mejeriers Arkitektkontor (DK). Project stage: identification, 4th EDF.

Rural hydraulics. Resp. Auth.: Ministère de l'Agriculture, des Eaux, Forêts, et des FAPA. Estimated total cost ± 12 mECU. EDF 3.5 mECU and 1.5 mECU (microprojects amount), UNEF (United Nations Equipment Fund) 1.8 mECU, USAID and UNICEF ± 2.6 mECU. Local ± 2.5 mECU. Construction of 460 water points (180 wells and 280 drills) and improvement of 405 sources. EDF part. EDF works: direct labour. T.A.: mutual agreement. UNEF: supply of drill equipment int. tender with UNEF rules. UNICEF: supply of different equipment and manual pumps: int. tender with UNICEF rules. USAID: management for direct labour: direct agreement. Date financial decision: January '82. 5th EDF.

Cotton development. Resp. Auth.: Ministère de l'Agriculture, des Eaux, Forêts et FAPA. Estimated cost 7 mECU. Rural infrastructure, supply of rural inputs, equipment, vehicles and T.A. Project on appraisal, 5th EDF.

Town planning and construction of council houses. Resp. Auth.: Ministère de l'Urbanisme et de l'Habitat. Estimated cost 9 mECU. Buildings, supply of equipment and T.A. Project on appraisal. 5th EDF.

T.A. to Ministère des P.M.E. et de l'Artisanat. Resp. Auth.: Ministère de P.M.E. et de l'Artisanat. One expert specialised in industrial work during 36 months. Project stage: identification. 5th EDF.

GUINEA BISSAU

Improvement of small scale fishing in Cacheu. Resp. Auth.: Secretariat d'Etat pour la pêche. 1.970 mECU. Improvement of infrastructure and equipment. Cold factory. Works: Acc. tender. Supplies: int. tender in '83. T.A.: direct agreement June '82.

Project on appraisal. Date foreseen for financial decision, april '82. 4th and 5th EDF.

North-East rural development. Resp. Auth.: Commissariat Général au Développement Rural. Estimated Cost: 10.8 mECU. EDF 6.8 mECU, F.A.C. 4 mECU. Crop production development (cotton, pea-nut, cereals) by harnessing cultivation, rural credit and correct crop trading. Supply of crop inputs by int. tender in '81 and '82. T.A.: by C.F.D.T. (F). Date financial decision, may '82. 5th EDF.

Rio Campossa Bridge. Resp. Auth.: Commissariat d'Etat aux Travaux Publics. Bafata-Bambadinca Road. Works, supply may be, T.A. Study on the way by STINCEM (I). Project on appraisal. 5th EDF.

Health infrastructures. Resp. Auth.: Commissariat d'Etat au Travaux Publics. Estimated cost 1.9 mECU. Construction and equipment of 2 district hospitals, 4 health centres and staff-housing. Date financial decision april '82. Supply of equipment: int. tender on 1st half 83. 5th EDF.

North-East forestry development. Resp. Auth.: Commissariat général au développement rural. Estimated cost 2.5 mECU. Project stage: identification. 5th EDF.

Rural hydraulics. Resp. Auth.: Ministère des ressources naturelles. Estimated cost 1.4 mECU. Construction of big diameter wells (1.5 m) about 120 wells in the GABU region. Works: int. tender, 1st half '82. Date foreseen for financial decision 4th quarter '82. 5th EDF.

GUYANA

East Bank Berbice rural development programme. Resp. Auth.: Ministry of Agriculture. Works: feeder roads, infrastructure. Supply of fertilizers and equipments. T.A. Project stage: identification. 5th EDF.

Faculty of Agriculture. Estimated cost 1.100 mECU. Construction, supply of equipment and supervision of works. Technical study and tender dossier: Rodriguez (ACP). Project on appraisal. 5th EDF.

Rehabilitation of sewerage and water supply systems of Georgetown. Estimated cost 1.9 mECU. Laying sanitation pipes, construction of water supply wells. Supplies and T.A. Project stage: identification. 5th EDF.

Upper Demerara Forestry Project. Supplementary Financing. 1.95 mECU. EDF Part. Date financial decision February '82. 5th EDF.

IVORY COAST

Trade promotion programme. Resp. Auth.: Centre Ivoirien du commerce Extérieur (CICE). EDF part 2.325 mECU. Local 8 mECU. EDF: vocational training actions (seminars and training) and products promotion (studies, marketing) and monitoring. T.A.: foreseen until end '83 for european offices and until end '85 for CICE in Abidjan. T.A.: direct agreement after prequalification. Date foreseen for financial decision 1st half '82. 5th EDF.

Consolidation of Marahoué Ranch. Resp. Auth.: Ministère de la production animale. (SO.DE.PRA) 13.600 mECU. EDF 7.5 mECU. Local 6.1 mECU. Land improvement works, infrastructure, equipments and T.A. Supplies: int. tender in '82. Works: direct labour. T.A.: mutual agreement. Date financial decision February '82. 4th and 5th EDF.

Extension of "Lycee Sainte-Marie of Abidjan". Resp. Auth.: Ministère de l'Education Nationale. 2.050 mECU. Construction and equipment of laboratories and specialized rooms. Works: acc. tender in '82. Supply of equipments: int. tender in '82. Date financial decision February '82. 3rd and 4th EDF.

JAMAICA

Assistance to Veterinary Services. Resp. Auth.: Ministry of Agriculture. 1.5 mECU. Works: construction of office by direct labour, supply of equipments, vehicles, X-ray equipment, medical products, int. tender or direct agreement. T.A.: training by direct agreement. Date foreseen for financial decision, 2nd half '82. 5th EDF.

Board of Revenue - Revenue Information System. Resp. Auth.: Govt of Jamaica. Estimated cost: 3.2 mECU. Reorganisation of the administration and preparation of the Revenue Information System. Supplies and T.A. Project stage: identification. 5th EDF.

KENYA

Machakos integrated development programme. Resp. Auth.: Ministry of Economic Planning and Community Affairs. 23.140 mECU. EDF 17.700 mECU, and Kenya government and farmers' contributions 5.440 mECU. Main elements are water development (construction of earth dams and other low-technology water schemes), agricultural (crop and livestock) improvement, soil conservation and strengthening of local community institutions and services. Works by acc. tender in 1981 and 1982. Supplies (cotton insecticides and crop inputs) by int. tender 1981/82, 1982/83. TA awarded to Salzgitter Consultant (D). Project in execution. 4th EDF.

Geophysical survey (Kerio Valley). Resp. Auth.: Ministry of Planning. 1.0 mECU. Survey to identify mineral prospects in the Kerio Valley. Study: on the way GEO SURVEY (D). 4th EDF.

Smallholder rice, Nyanza Province. Resp. Auth.: Ministry of Agriculture. 4.350 mECU. Rehabilitation of 4 smallholder rice schemes (650 ha). NEDECO (N). Works, supplies. T.A.: Supply of vehicles and equipment, int. tender launched June '82. Project in execution. 5th EDF.

Kenya Trade Promotion. Resp. Auth.: Kenya External Trade Authority. 1 mECU. T.A. for sales and marketing missions, provision of equipment and materials for the Training Division. Project in execution. 5th EDF.

Development of the Kisii Valley. Resp. Auth.: Ministry of Agriculture, Provincial Irriga-

tion Unit (PIU). Total estimated cost 7.906 mECU. EDF 4.822 mECU, Netherlands, 2,087 mECU, local 0.997 mECU. Works: irrigation and draining, construction of buildings and storages. Supply of tractors and lorries. T.A. foreseen with Netherland aid. Works: int. tender or direct agreement considering size. Supply: int. tender and direct agreement on June '82. Project in execution. 5th EDF.

Sergoit-Tambach Road. Resp. Auth.: Ministry of Transport and communications. Estimated cost 10 mECU. Bitumized road \pm 30 km. Works and supervision. Int. tender conditional upon provisional finance foreseen on april '82. Date foreseen for financial decision 1st half '82. 5th EDF.

Eldoret Polytechnic. Estimated cost. 6 mECU. Construction, supply of equipment (pedagogical) and T.A. Project stage: identification. 5th EDF.

Veterinary Investigation Laboratory Mariakani. Adm. Resp.: Ministry of Livestock Department. Veterinary Department. 3.4 mECU. Construction of a veterinary investigation laboratory. Supply of materials and equipments. T.A. Materials and equipment: int. tender 1st quarter '82. T.A.: direct agreement. Date financial decision december '81. 5th FED.

Turkwell hydro-electric project. Resp. Auth.: Ministry of Energy. Feasibility study to be done. Project stage: identification. 5th EDF.

KIRIBATI

Rehabilitation of the South Tarawa telephonic network. Resp. Auth.: Controllor of Telecommunications of the Ministry of Communications and Works. 2.894 mECU. Works by direct labour. Supply of equipment int. tender mid-'82. Supervision of works: direct agreement. Date financial decision march '82. 4th EDF.

LESOTHO

Maseru airport. Resp. Auth.: Ministry of Transport and Communication. Estimation 50 mECU. Provision of a modern international airport 15 km south of Maseru. Foreseen funding: Lesotho 2.2 mECU - Saudi Fund 7.4 mECU - Kuwait Fund 3.1 mECU - ABE-DA 4.4 mECU - OPEC 2.2 mECU - Abu Dhabi 0.6 mECU - ADB 7.7 mECU. EDF 4.0 mECU - Project on appraisal. 4th and 5th EDF.

Rural Primary Schools Improvement. Resp. Auth.: Ministry of Works. 0.400 mECU. Construction and furnishing of ten 2-classroom units. Works: acc. tender or direct agreement. Supplies: direct agreement. 4th EDF.

Feasibility study for the project: "Lesotho Highland, Water Scheme". Resp. Auth.: Ministry of water resources, energy and mines. Estimated cost \pm 5 mECU. Short-list will be drawn up after int. tender foreseen on 2nd quarter '82. Project on appraisal. Date financial decision, march '82. 5th EDF.

Mohale's Hoek - Quthing road. Resp. Auth.: Ministry of Transport and communications. Reinstatement of a road. 50 km. Estimated cost ± 15 mECU. EDF contribution estimated for ± 8.5 mECU. Cofinancing needed. Project stage: identification 5th EDF.

LIBERIA

Coffee and cocoa development project at Zwedru and Plahn. Resp. Auth.: Ministry of Agriculture 5.7 mECU, EDF 2.9 mECU, Local 2.8 mECU. To develop 980 hectares of robusta coffee and 1 320 hectares of cocoa in Grand Gedeh and Sinoe countries. Works by acc. tender. — Supplies by int. tender in '82. Project in execution. 4th EDF.

Buto oil palm. Resp. Auth.: Ministry of Agriculture. Study on the way by I.R.H.O. (F) for phase 2.

MADAGASCAR

Development of coconut palm plantations in Sambava. Resp. Auth.: Ministère de l'Agriculture et de la Réforme Agraire. 5.757 mECU. Creation of 2 000 ha new plantations. Equipment, crop inputs, infrastructure. Works and equipments: int. tender, launched. Crop inputs (fertilizers and pesticides): int. tender, 1st half '81, '82, '83, '84. Int. tender for 82-83 launched may '82. Project in execution. 4th EDF.

Rural hydraulic. Resp. Auth.: Ministère de l'Agriculture et de la Réforme Agraire. 7 mECU + Local. Irrigation improvement for traditional rice-plantations in the Hauts Plateaux. Works by direct labour in '81 up to '85. Supply of means of transport and equipments: int tenders in '81 up to '83. T.A.: short-list already drawn up. Date financial decision, december '81. 5th EDF.

Sambava oil-palm factory study. Resp. Auth.: Ministère de l'Agriculture et de la Réforme Agraire. Preliminary study: I.R.H.O. (F). Study to be done: faisibility. Short-list already drawn up. Project on appraisal. 4th EDF.

Bridges over RN 5A, Isesy-Vohemar. Resp. Auth.: Ministère des Travaux Publics. Estimated cost ± 9.750 mECU. Reinstatement and construction of bridges. (15). Project on appraisal. 5th EDF.

Supply of pharmaceutical and medical products and analysis of the industrial sector rehabilitation. Resp. Auth.: Gouvernement de Madagascar. 2.165 mECU. Supply by int. tender of special milk and products for children, medical fabrics. Industrial sector expertise by direct agreement. Date foreseen for financial decision 1st half '82. 5th EDF.

Urgent programme. Resp. Auth.: Ministère de la production agricole et de la réforme agraire. Damage from cyclonic depressions. Rice-growing areas 3 mECU. Works by direct agreement or direct labour. Supervision of works: Hydroplan (D). Rehabilitation study: short-list already drawn up. Sambara coconut palm plantations: works

by direct labour. 1.2 mECU. Date foreseen for financial decision June '82. 5th EDF.

MALAWI

National rural development programme, phase I Resp. Auth.: Ministry of Agriculture. Integrated rural development programme financed in parallel with other donors. Infrastructural improvement, roads, housing, boreholes. EDF 7.9 mECU, UK 9.0 mECU, Germany 5.1 mECU, IBRD 14.6 mECU. CIDA 2.0 mECU, USAID 0.6 mECU, Local 7.5 mECU. Int. tender for vehicles and equipment in 1982. TA: Huntings Consultant (UK). Project in execution. 4th EDF.

Blantyre-Mwanza road. Resp. Auth.: Ministry of Works. Reinstatement and asphaltting of the road (± 95 km). Economical study: Hoff & Overgaard Consultant (DK). Technical study: COWI CONS (DK). Project on appraisal. 4th EDF.

Dairy cattle development. Resp. Auth.: Ministry of Agriculture. Cross local bovine breed with european dairy breeds. Study to be done: factibility. Short-list already drawn up. Project stage: identification. 5th EDF.

Improvement of district hospitals and health centres. Resp. Auth.: Ministry of Works. Building of small district hospitals and health centres. Works, supplies and T.A. Project stage: identification. 5th EDF.

MALI

Strengthening of sanitary infrastructure in the Nioro region. Resp. Auth.: Ministère de la Santé et des Affaires Sociales et Ministère des Transports et T.P. 2.570 mECU. Buildings, equipments, training. Architecturals and technicals studies: GOUSIER (F). Date financial decision end of october '81. 4th EDF.

N'Dama Yanfolila operation. 2nd phase. Resp. Auth.: Direction Générale de l'Elevage. 3 mECU. Production of race N'Dama improved begetters and cattle for harnessing. Valuation and orientation study: I.E.M.V.T. Consultant (F). Rural engineering works. Supply of equipments. T.A. Date financial decision end october '81. 5th EDF.

Sevare-San road repairing. Resp. Auth.: Ministère des Transports et Equipment. Complementary study: short-list already drawn up. Project on appraisal. 4th EDF. Works by int. tender. 4th and 5th EDF.

Rural hydraulics. Resp. Auth.: Ministère du Développement Industriel et du Tourisme. Direction de l'Hydraulique. Estimated cost: 3.4 mECU. Water-points. Study: situation of the hydrolic sector in the project area: UNIGEO (I). Project stage: identification. 5th EDF.

Action programme for Mali development. Resp. Auth.: Ministère du Plan. 2.6 mECU. Actions for rural sector, for tobacco, for "l'office du Niger", seed and crop protection, livestock, human hydraulics, public works and transport. Works, supply of 6 solar pumps and 4 wind pumps, reinstatement of 2 feeder roads and 1

bridge. Works: acc. tender. Supplies: int. tender or direct agreements. Date foreseen for financial decision 2nd half. 5th EDF.

MAURITANIA

Extension of Kaédi regional hospital. Resp. Auth.: Ministère de l'Équipement. 1.925 mECU. Construction, equipment and TA for Kaédi hospital (100 beds). Works: on the way. Medical-technical equipment int. tender, 2nd half '82. Project in execution. 4th EDF.

Monitoring for small irrigated areas. Resp. Auth.: Ministère du Développement Rural. Estimated cost: 3 mECU. T.A. and monitoring, direct agreement. Supply of agricultural input and pumping equipment: int. tender, 1st quarter '82. Works by direct labour. Project in execution. 5th EDF.

Regeneration of Gum-tree plantations. Resp. Auth.: Ministère du Développement Rural. Estimated Cost: 1.5 mECU. Feasibility study: Bureau COURTOY (B). Works. T.A. and supplies. Project in execution. 5th EDF.

Small dams construction in the Hodhs region. Resp. Auth.: Ministère du Développement rural. Estimated cost 3.5 mECU. Study on the way Binnie and Partners (UK). Project on appraisal. 5th EDF.

Nouakchott - Rosso Road. Resp. Auth.: Ministère des Travaux Publics. Estimated cost 21 mECU. EDF contribution estimated for ± 5 mECU. Cofinancing needed. Repairing and reinstatement. Technical study necessary. Project stage: identification. 5th EDF.

Livestock development in the South-East. Resp. Auth.: Ministère du Développement Rural. 3.943 mECU. Works, supplies and T.A. Supply of vehicles, equipment and veterinary products, int. tender 1st half '82. T.A.: direct agreement. Works by direct labour. Date foreseen for financial decision April '82. 5th EDF.

Regional capitals water supply. Resp. Auth.: Direction de l'Hydraulique. Estimated cost 2.5 mECU. Studies: deep water research and towns water supply. Short-list not yeat drawn up. 5th EDF.

MAURITIUS

Mauritius housing project. Resp. Auth.: Mauritius Housing Corporation and the Ministry of Housing, Lands and Town and Country Planning. 3.2 mECU. Financing (for low income households) of approximately 1 250 housing units. Infrastructure work for urbanisation and service plots: int. tender, in '82. Consultancy service: — APFEL (D). 4th EDF.

Development of Ile Rodrigues. Resp. Auth.: Ministry of Agriculture. Development centred on agricultural production. Economical and technical study, on the way; VINK (NL). Date foreseen for financial decision: june '82. 5th EDF.

Investments and trade promotion. Resp. Auth.: Ministry of Trade and Industry.

(Investment Promotion Unit and Export Promotion Unit). 1.610 mECU. Contracts by direct agreements. Date financial decision end October 81. 5th EDF.

Strengthening of the sanitary infrastructure. Resp. Auth.: Ministry of Health. 3.150 mECU. Reinstatement and extension of 3 hospitals and 2 health centres. Supply of equipment, int. tender in '82. Date foreseen for financial decision June '82. 5th EDF.

NIGER

Development of modern rice-growing on Niger river. Resp. Auth.: Ministère de l'Agriculture. Office National des Aménagements Hydro-Agricoles (ONAHA). 5.5 mECU. Development of 375 ha in fully controlled water to allow double annual rice cultivation. Works and supplies: int. tenders in '82. Technical supervision and monitoring: BELGROMA (B). 4th EDF.

Main lines for regional development of areas affected by Kandadji Dam. Resp. Auth.: Ministère des Travaux Publics, des Transports et de l'Urbanisme. Consultancy service (study): Main lines: GIBB (UK). Project on appraisal. 4th EDF.

Air Valley development. Resp. Auth.: Ministère de l'Agriculture. Estimated cost 2.8 mECU. Hydro-agricultural works. Project stage: identification. 5th EDF.

Rural hydraulics. Resp. Auth.: Ministère de l'Hydraulique. 300 drills in the Zinder region. Hydrogeological study and tender dossier: Bureau GKW (D). Project on appraisal. 5th EDF.

Kolo water supply. Resp. Auth.: Ministère de l'Hydraulique. Estimated cost 1 mECU. Study on the way: G.K.W. (D). Project on appraisal. 5th EDF.

Animal disease control. 2nd phase. Resp. Auth.: Ministère du Développement Rural. 1.840 mECU. Supply of equipment and T.A. Supplies: int. tender on 2nd half '82. Date foreseen for financial decision June '82. 5th EDF.

NIGERIA

Hydraulic development. Resp. Auth.: Ministry of Education. Estimated Cost: 2.350 mECU. Equipment for Technological Institute of Kaduna. T.A.: Bureau M.R.T. (UK and Nigeria). Supply of drilling equipment; int. tender: 1st quarter '82. Project on appraisal. 5th EDF.

PAPUA NEW GUINEA

Development of beef and veal production. Resp. Auth.: Ministry of Agriculture. 1.868 mECU. Project to consider possibilities to develop cooperative ranch. Study to define project: Bureau Hunting (UK). Supplies: restr. tender in '82. Project in execution. 4th EDF.

Foodstuffs production on the south coast. Resp. Auth.: Department of Primary Industry. Estimated cost 2.200 mECU. Development of seasonal cultivation and marketing. Technical and economic studies.

Definition of the project: Produce Studies Ltd. Consultant (UK). Date foreseen for financial decision: 1st quarter '82. 4th EDF.

Momote airport. Resp. Auth.: Department of Transport and Civil Aviation. Estimated cost 0.930 mECU. Reconstruction and sealing of runway. Project on appraisal. 5th EDF.

Hiritano Highway. Resp. Auth.: Department of Works. 2.5 mECU. Asphaltting of an hearth road of ± 22 km. Preparation of int. tender dossier, on the way by local administration. Int. tender for works foreseen in '82. Date foreseen for financial decision July '82. 5th EDF.

RWANDA

Bugesera water supply. Resp. Auth.: Ministère du Plan. Construction of a drinking-water network in Bugesera. Project on appraisal. 5th EDF.

Development of Zaire Nil Crest. Resp. Auth.: Ministère de l'Agriculture 13.8 mECU. Développement of agricultural production and social-economic infrastructure. T.A.: short-list already drawn up. Supply: int. tender in '83. 5th EDF.

Transmission-lines study in secondaries centres. Resp. Auth.: Ministère du Plan. Economical and technical studies to be done. Short-list not yet drawn up. 5th EDF.

IPN of Ruengeri - vocational school. Resp. Auth.: Ministère de l'Education. Estimated cost 0.970 mECU. Works, equipments, expert's mission. Project stage: identification. 5th EDF.

Cyangugu-Butare Road. Resp. Auth.: Ministère des Travaux Publics. Estimated cost 74 mECU. Reinstatement and asphaltting of the exiting hearth road. (153 km). Economical study: SEDES (F). Technical study part Butare-Ntendezi: DHV (N) on 4th EDF. Cofinancing: World Bank, BAD, Kuwait Fund (possible). Project on appraisal. 5th EDF.

Educational and handicraft integrated centres. Resp. Auth.: Ministère de l'Enseignement primaire et secondaire. Estimated cost ± 2 mECU. Construction and equipment of 40 centres. Project on appraisal. 5th EDF.

Lines of credit for S.M.E. Resp. Auth.: Banque Rwandaise de Développement. 0.700 mECU. Development of the credit to the S.M.E. rurals with "Banque Populaire". Project stages identification. 5th EDF.

Strengthening of the "public enterprises". Resp. Auth.: Ministère du Plan. Estimated cost 2.595 mECU. Creation of a central accountancy agency, training and control data. Supply of equipment for auditing and office and vehicles. T.A. Project stage: identification. 5th EDF.

ST LUCIA

Livestock development project. Phase 2. Resp. Auth.: Ministry of rural development. Estimated cost 0.860 mECU. Extension project zone. Works, supplies and T.A. Project on appraisal. 5th EDF.

Project on appraisal. 5th EDF.

ST VINCENT AND GRENADINES

Union Island clinic. Resp. Auth.: Ministry of Health. Estimated 0.450 mECU. To improve health care at the remote Union Island by establishing a new clinic (total gross area ± 400 m²) and also housing accommodation for the staff (± 300 m²). Works: on the way. Equipement: int. tender in '82. Project in execution. 5th EDF.

Improvement of the general hospital at Kingstown. Resp. Auth.: Ministry of Health. 1.550 mECU. Follow-up of phase 1 financed from 4th EDF. New extension. Works: on the way. Equipments: int. tender in '82. Project in execution. 5th EDF.

SAO TOME PRINCIPE

Oleogineus cultivation Resp. Auth.: Ministère de l'Agriculture. Funding, 5 mECU. EDF ± 2.16 mECU. Selected oil palm-tree plantations over 300 to 500 ha. Project in execution. 5th EDF.

SENEGAL

Increase of cereal-growth in S.O. Resp. Auth.: Ministère du Développement Rural. 4.68 mECU. Preparatory study: SODEFITEX (Senegal). Hydro-agricultural improvements in small areas. Works by direct labour. Supply of crop inputs and pumping equipment: int. tender in '82. Project in execution. 5th EDF.

New energy research and test in rural region. Resp. Auth.: Secretariat d'Etat à la Recherche Scientifique. 1.5 mECU. Creation of pilot unit for solar energy, biomass and wind energy. Studies T.A. and equipment. Studies: short list not yet drawn up. T.A.: direct agreement end 82. Equipments: int. tender end 82. Project on appraisal. 5th EDF.

Rubber tree plantation. Resp. Auth.: Ministère du Développement Rural. Estimated cost 2.5 mECU. Works, supplies and T.A. T.A.: short-list not yet drawn up. Project in execution. 5th EDF.

Sewerage of the "Gueule Tapée" district. Resp. Auth.: Direction Générale des Travaux Publics. Estimated cost 7 mECU. Construction of canalization and pipes for rain waters. Improvement of the sewage network. Definition study and tender dossier: GEO PROGETTI (I). Project on appraisal. 5th EDF.

TAIBA "ICS" complex water supply. Resp. Auth.: Ministère de l'Equipement. Regional project. Estimated cost 10 mECU. Factory water supply with 5 drills distance 20 km and a pipe of 500-600 mm. Study about phreatic sheet: ARLAB (F) and Beller Consult (D). Int. tender launched April '82. Project on appraisal. Date foreseen for financial decision July '82. 5th EDF.

Rural Hydraulics. Resp. Auth.: Ministère de l'Equipement. Directeur de l'Hydraulique. 1.7 mECU. Construction of 21 drills. Study for phreatic sheet and modalities for execution.

tion: UNIGEO (I). Project on appraisal. 5th EDF.

Trade Promotion programme. Resp. Auth.: Centre Sénégalais du Commerce Extérieur. 1.083 mECU. Actions for productions, marketing and T.A. Contract: direct agreement or restr. tender. Date financial decision January '82. 5th EDF.

Renovation of "St. Louis Hospital" and of the health centre of Tambacounda. Resp. Auth.: Ministère du Plan et de la Coopération. Estimated total cost 3.725 mECU. EDF 2.825 mECU. Luxembourg 0.900 mECU. Works: acc. tender 2nd half '82. Supplies: int. tender in '83. Date foreseen for financial decision may '82. Project in execution. 5th EDF.

Expenditures previously foreseen as participation of Govt. of Senegal for 3 projects financed on 4th and 5th EDF, charged on 5th EDF. 1.985 mECU. Complementary funding for the project: "Livestock development" 0.700 mECU. Complementary funding for the project "Construction and equipment of ENIIE", 0.900 mECU. Complementary funding for the project "Handicraft promotion". 0.385 mECU. Date foreseen for financial decision June '82. 5th EDF.

Small villager areas. (Podor). Resp. Auth.: Ministère du Développement Rural. Estimated cost 4.700 mECU. Hydra-agricultural improvement of 1000 ha in 20 small areas. Works: irrigation, tracks. Supply of motor-pumps. T.A.: Project on appraisal. 4th and 5th EDF.

Kavil-Keur Madiabel Road. Resp. Auth.: Direction Générale Travaux Publics. Estimated cost ±2.209 mECU. Widening and modernization of the road. 24 km. Acc. tender foreseen 2nd or 3rd quarter, conditional upon provisional finance. Date foreseen for financial decision September '82. 5th EDF.

Noirot Bridge at Kaolack. Resp. Auth.: Direction Générale Travaux Publics. Estimated cost 2.4 mECU. Existing bridge replacement with a new T.A.: to prepare technical dossier for an int. tender with prizes. Int. tender foreseen 2nd half '82. 5th EDF.

SEYCHELLES

Redevelopment of Victoria Hospital. Resp. Auth.: Ministry of Health. Estimated cost 6 mECU. EDF 2.4 mECU, ADB (African Dev. Bank) 3.6 mECU. Renovation and new constructions, supply of medical equipment. Project on appraisal. 5th EDF.

SIERRA LEONE

North-western integrated agricultural development project. Resp. Auth.: Ministry of Agriculture and Forestry. Four-year integrated programme to develop mangrove swamps, upland crops, coastal fishing, infrastructure. Estimated Cost: 6.03 mECU. EDF 4.9 mECU. Local 1.13 mECU. Works: acc. tender. Supplies: int. tender. T.A.: direct agreement. Date financial decision, February '82. 4th and 5th EDF.

Koinadugu — Phase II. Resp. Auth.: Ministry of Agriculture and Forestry. Estimated cost 7.5 mECU. Project on appraisal. Date foreseen for financial decision September-October '82. 5th EDF.

Support for existing educational institutions. Resp. Auth.: Ministry of Education. 2.050 mECU. Water and electricity supply and equipment for Njala University College, building and equipment of additional hostel accommodation at several teacher training colleges. Njala University: works for water supply, int. tender in 1982. Agricultural equipment: int. tender, in 1982. Teacher training colleges — building works: int. tender, in 1982. 4th EDF.

POTORU Rubber project. Resp. Auth.: Ministry of Agriculture and Forestry. Cofinanced project with CDC (UK) and CCCE (F). 2.4 mECU for EDF part. Date financial decision April '82. 5th EDF.

Rural hydraulics. Resp. Auth.: Ministry of Agriculture and Forestry. Estimated cost 2.5 mECU. Construction of water points for villages with 2000 inhabitants. Study to prepare project and appraisal: IWACO (NL). Date foreseen for financial decision 4th quarter '82. 5th EDF.

Kambia Fishery Development. Resp. Auth.: Ministry of Agriculture and Forestry. Total estimated cost 1.166 mECU. EDF 0.882 mECU. Local 0.284 mECU. Construction of 2 buildings and a boatyard, supply of boats, motors, vehicles and T.A. Project stage: identification. 5th EDF.

N'Jala University College Water Supply. Resp. Auth.: Sierra Leone Electricity Corporation (S.L.E.C.) Estimated cost 0.950 mECU. Water supply capacity of 1000 m³ per day. Pumping station, water tanks, network. Study to determine system: E. Davies and Ass. (UK). Project on appraisal. Works: acc. tender, 2nd half '82 upon provisional acceptance. 5th EDF.

SOLOMON ISLANDS

Forestry Programme. Resp. Auth.: Forestry Division. 0.625 mECU. Establishment of 1,800 ha of tree plantations (mahogany and teak). Associated infrastructure and equipment. Works: direct labour. Equipments: direct agreement on 81,82 and 83. 4th EDF.

Viru reforestation Project. Resp. Auth.: Forestry Division. 1.450 mECU. Creation of 875 ha different plantations in New Georgia Island. Works and equipments. Project on appraisal. Date foreseen for financial decision July '82. 5th EDF.

SOMALIA

Saakow rural experimental centre. Resp. Auth.: Ministry of Agriculture. Creation of an irrigated area (60 ha) with all facilities and equipment. Aim: agronomical experiments. Study: Bureau Nuovo Castoro (I). Estimated total cost: 5.026 mECU. EDF: 4.950 mECU. Local 0.076 mECU. Works: 4 kms of tracks, pump station (180 l/s) electric power station (120 KVA). Supply of: agricultural equipment, 3 tractors, vehicles,

furnitures. T.A.: Istituto Cerealicoltura (I) Land improvement works and estate infrastructure: contracts awarded. Supplies: int. tender 4th quarter '82. Project in execution. 4th EDF.

Bardheera Dam. Resp. Auth.: Bardheera Dam Authority (BDA). 433 mECU. (Estimated) Dam Project 349 mECU. Powerline to Mogadishu 84 mECU. Funding: EDF 44 mECU, Italy 36 mECU. Germany 32 mECU, France 18 mECU, Saudi Arabia 50 mECU, Local 20 mECU. Power and river regulation for agricultural development. Construction of a concrete gravity dam with hydro-power station, associated infrastructure and electrical transmission lines. The dam will provide water, flood protection and power for up to 233 000 ha of irrigated agriculture in the Juba Valley, and energy to Mogadishu. Consultancy services: restr. tend. procedure after prequalification. Tender launched in November '81. In a second stage, 5th EDF, project the consultant will supervise construction. Civil works: first int. tender during 1983. Transmission lines int. tender in 1983. Equipment: powerhouse main equipment and auxiliary equipment, int. tenders in 1984. Gates, valves, intake equipment, int tender in 1985. Study: 4th EDF. Works: 5th EDF.

Mogadishu Slipway. Resp. Auth.: Ministry of Planning. 3 or 4 mECU. Construction of a slipway and ship repair facilities in Mogadishu harbour. Feasibility study on the way: AVECO (NL). Date foreseen for financial decision: in '82. 4th EDF.

Mogadishu Dairy. Resp. Auth.: Ministry of Industry. Estimated cost 3.81 mECU. EDF 1.250 mECU. EIB 2.56 mECU. Rehabilitation of the existing dairy. Works, supply of equipment and T.A. Supplies, int. tenders 2nd quarter '82. T.A.: short-list already drawn up. Date financial decision October '81. 4th EDF.

Mogadishu Institute of Statistics. Resp. Auth.: Ministry of Public Works. Estimated cost: 0.800 mECU. Works: contract awarding. Supply: int. tender in '83. Project in execution. 4th EDF.

Goluen-Gelib Road. Resp. Auth.: Ministry of Public Works. Complementary funding. EDF 18.976 mECU. Project in execution 4th EDF. Complementary funding 4th and 5th in October '81.

Development of pheniculture (date-palm). Resp. Auth.: Ministry of Agriculture. Estimated cost 2 mECU. 1000 ha plantation in the North region. Supply of equipment, machines, inputs, rural monitoring. T.A. to define, may be French aid. Project on appraisal. 5th EDF.

Mogadishu water supply. Resp. Auth.: Ministry of Planning. Estimated total cost 38.5 mECU. EDF 6 mECU. Foreseen cofinancing, World Bank, Arab Funds et Local. New drills and strengthening of existing network. 2 int. tenders foreseen 2nd quarter '82. Date foreseen for financial decision 1st half '82. 5th EDF.

Somalia Trade Promotion. Resp. Auth.: Ministry of National Planning. 0.670 mECU.

Four independent components: development of supportive infrastructure and T.A. for frankincense, myrrh and gums. Identification of obstacles to livestock exports and study of livestock marketing. Participation in Trade Fairs. Training, short term consultancies. Date foreseen for financial decision: may '82. 5th EDF.

"Aula Magna" Mogadishu National University. Resp. Auth.: Ministry of Public Works. ±2.5 mECU. Project on appraisal. 4th EDF.

SUDAN

Jebel Marra rural development project. Resp. Auth.: Ministry of Agriculture, Food and Natural Resources. 15.043 mECU. EDF 11 mECU. Local 4.043 mECU. Agricultural extension and improvement or rural infrastructure (road improvement and maintenance, forestry programme, community development programme). Supplies: int. tenders in 1982 and 1983. TA: Hunting Technical Services Ltd (UK). Project in execution. 4th EDF.

Juba airport. Resp. Auth.: Civil Aviation Department. 21.5 mECU. EDF 16.3 mECU. Local 5.2 mECU. Construction of a new airport. Consultant: bureau NACO (N). Works: on hand. Supply: int. tender 2nd quarter '82. Project in execution. 4th EDF.

University of Juba, phase II. Resp. Auth.: Ministry of Education. 7 mECU. Additional facilities on the new campus for a capacity of about 400 students: 3 hostels, (1 100 m² each) dining hall and kitchen (360 m²), 3 college buildings (1 850 m²), 21 staff houses (each 170 m²). Works including infrastructure for water, sewerage and electricity: int. tender in 1982. Equipment: int. tender in 1983. 4th EDF.

Four higher secondary technical schools. Resp. Auth.: Ministry of Education. 6.3 mECU. Renovation and new constructions of four existing schools, each with a capacity of 324 students. Works contracts already awarded. Equipment: int. tender in 1982. Supervision of works: GBWA Int. (Irl.) Project in execution. 4th EDF.

Upper Talanga Tea Project - Phase 2. Resp. Auth.: Ministry of Agriculture, Food, and Natural Resources 12 mECU. Works, supplies and T.A. Supply of vehicles, agricultural machinery, equipments, material inputs, int. tender '82 or '83. Other works by direct labour or restr. tender or direct agreement. T.A.: short-list already drawn up. 5th EDF.

T.A. for Sudan Rural Development Company Ltd. (SRDC) and Sudan Rural Development Finance Company Ltd. (SRDFC). Resp. Auth.: Sudan Development Corporation. SDC. 1.2 mECU. Provision of three experts for 4 years short-list already drawn-up. Date financial decision January '82. 5th EDF.

Trade Promotion Sudan. Resp. Auth.: Ministry of Co-operation, Commerce and Supply. 0.340 mECU. Studies, T.A. and participation in trade fairs. Studies and contract

by direct agreement. Date financial decision: June '82. 4th EDF.

Port Sudan-Hayia Railway. Resp. Auth.: Sudan Railway Corporation. Expertise. Short-list already drawn up. 4th EDF.

Aweil Rice Development Project Phase II. Resp. Auth.: Ministry of Agriculture, Food and Natural Resources. Total estimated cost 14.181 mECU. EDF 9.8 mECU, Local 4.381 mECU. Construction of buildings and rice mill. Supply of vehicles, agricultural equipment and machinery. T.A. Project on appraisal 5th EDF. Date foreseen for financial decision July '82.

Agricultural Inputs and Rehabilitation Project (AIRP). Resp. Auth.: Ministry of Agriculture, Food and Natural Resources. Total estimated cost 103 mECU. EDF 16 mECU, I.D.A. 56.5 mECU. ADF 8.4 mECU, Local 22.100 mECU. Works, irrigation and drainage structures, buildings, roads, water supplies and installation of pumps for Blue and White Nile Schemes. Supply of fertilizers for Gezira. Project on appraisal, 5th EDF. Date foreseen for financial decision June '82.

SURINAM

Rice project at Coronie. Resp. Auth.: Ministerie van Landbouw, Veeteelt, Visserij en Bosbouw. Rice production developments. Study on the way. EUROCONSULT (NL). Project stage: identification. 5th EDF.

Surfacing of the road Alkmaar-Tamanredjo. Resp. Auth.: Stichting Plan Bureau. 1.850 mECU. Works: acc. tender. Project an appraisal. Date foreseen for financial decision July '82. 5th EDF.

SWAZILAND

Rural hydraulics. Resp. Auth.: Ministry of Agriculture. Estimated cost 2.38 m ECU. Project on appraisal. 5th EDF.

TANZANIA

Training of irrigation engineers. Resp. Auth.: Ministry of Finance. 0.920 mECU. Degree courses in irrigation engineering for 30 irrigation engineers. Training will take place in India. Date foreseen for financial decision June '82. 5th EDF.

Coffee improvement programme phase 2. Resp. Auth.: Coffee Authority of Tanzania (CAT). 13.500 mECU. Extension and intensification of the activities promoted under the phase 1. The programme will cover improvements in production (through extension services, inputs, supply), roads and storage facilities. CAT will itself prepare the phase 2 project. Date financial decision June '82. 5th EDF.

Iringa integrated rural development, phase 2. Resp. Auth.: Iringa Regional Development Directorate. 19.325 mECU. To extend and intensify the activities currently being carried out under phase 1. Main elements are strengthening of extension services, provision of farm inputs, extension of the oxen cultivation programme, improvements of the road system and promotion of animal production. Date financial decision: February '82. 5th EDF.

Lusahunga-Bukombe road. Resp. Auth.: Ministry of Works. 20 mECU. Bitumen road of 127 km. Works: int. tender prequalification launched end of September '81. Int. tender foreseen 2nd quarter '82. Supervision of work: award of contract on the way. Seek for cofundings. Regional project. 4th EDF.

Technical teacher training college, Mtwara. Resp. Auth.: Ministry of Education. 1.4 mECU. Training facilities for technical teachers. Classrooms, laboratory and workshops, dormitories and sanitary block, administration. Total area 3 765 m². Works: on the way. Equipment: int. tender with possibility of restr. tender or direct agreement depending on nature of supply. Supplies: restr. tender all in '83. Project in execution. 4th EDF.

Extensions to the Mbeya Water Supply System. Resp. Auth.: Ministry of Water, Energy and Minerals. 4.050 mECU. Construction of an abstraction point, a pipeline, a pumping station, reservoirs. Supplies and site supervision. Works and supplies: int. tender after prequalification launched October '81. Contracts: Jennings and O'Donovan (Irl). Date foreseen for financial decision: 1st quarter '82. 4th EDF.

Mtwara Water Supply. Resp. Auth.: Ministry of Water, Energy and Minerals. 5 mECU. Works: drilling of new wells, and constructions. Supply of equipment and T.A. Drilling activities and power supply connections by direct labour. Other works: int. tender in '82. Supplies: int. tender in '82. Supervision of works: direct agreement. Date financial decision, October '81. 5th EDF.

Vehicle repair project. Resp. Auth.: National Transport Corporation (NTC). 13 mECU. Recovery and repair of equipment in the transport sector. Supply of engines, gearboxes, spare-parts. Supplies: int. tender launched April '82. Date financial decision end October '81. 4th EDF.

Mwanza Water Supply. Resp. Auth.: Ministry of Water, Energy and Minerals. 11 mECU. Construction of a new water intake, installation of a new pumping equipment and treatment plant, laying of a new distribution pipelines. T.A. Works and supplies, int. tender foreseen 2nd half '82. Contracts: direct agreement. Date foreseen for financial decision April '82. 5th EDF.

TOGO

Cattle-raising in palm plantation. Resp. Auth.: Ministère du Développement Rural. 1.136 mECU, EDF 0.884 mECU, Local 0.252 mECU. Stock-farming under palms to improve meat production and to make industrial palm plantation maintenance easier. Study: project plans, Bureau SOTED (Local). Works: direct labour. Supplies: vehicles, int. tender in 1982. Supplies, equipment and cattle purchase: direct agreement. 4th EDF.

Adele Ranch. Resp. Auth.: Ministère du Développement Rural. 3.207 mECU, EDF 2.788 mECU, Local 0.419 mECU. Establish-

ment of a cattle ranch for local supply of oxen, improved heifers and breeding bulls, surplus for local slaughter and market. Works: direct labour. Supply: graders and vehicles, int. tender, 1st half '82. T.A.: Zoo-consult (I). Project in execution. 4th EDF.

Strengthening and improvement of 4 roads. Resp. Auth.: Ministère des Travaux Publics, des Mines, de l'Energie et de Ressources Hydrauliques. Estimated cost 13.600 mECU. Aflao-Avezopo road (19 km) - Lomé-Kpaliné road (118 km) - Atakpamé-Blitta road (100 km). Avezopo-Aneho (30 km). Works: int. tender foreseen 1st quarter '82, conditional upon provisional finance. Date foreseen for financial decision september '82. 5th EDF.

Rural hydraulics. Resp. Auth.: Ministère des Travaux Publics. Estimated cost 4 mECU. Construction of ± 300 drills, supply of manual pumps and training. Drills: int. tender, 1st quarter '83. Date foreseen for financial decision, 4th quarter '82. 5th EDF.

Credit to C.N.C.A. (Caisse Nationale de Credit Agricole) to develop actions in rural sector. Resp. Auth.: C.N.C.A. Estimated cost 2 mECU. Loans with favourable conditions. Project on appraisal. 5th EDF.

UGANDA

Nutritional rehabilitation centres. Resp. Auth.: Ministry of Health and Ministry of Works. 1.100 mECU. To improve health care in rural areas and to reduce malnutrition (particularly widespread among children). Contribution and equipping of 10 centres. Works: acc. tender. Supply: int. tender in '83. Project on appraisal. 4th EDF.

Coffee rehabilitation programme. Resp. Auth.: Ministry of Agriculture and Forestry. 25 mECU. Works, equipment, training and T.A. Works by direct agreement. Supplies: int. tender or acc. tender or restr. tender. T.A.: Booker Agricultural (UK). Supply: int. tender 2nd half '82. Project on execution. 4th EDF.

Karamoja Development Programme. Resp. Auth.: Ministry of Agriculture and Forestry. 4.400 mECU. Constructions and Civil works. Transport, Equipment, Supplies, Training. T.A. by Lutheran World Federation. Equipment and supplies, acc. tender in '82. Project in execution. 5th EDF.

Rehabilitation of the seeds industry. Resp. Auth.: Ministry of Agriculture and Forestry. 9 mECU. To increase production and distribution of improved seeds. Project preparation: Bureau Courtoy (B). Date foreseen for financial decision 2nd half '82. 5th EDF.

Rural electrification project. Resp. Auth.: Ministry of Agriculture and Forestry. Estimated cost 7 mECU. EDF 5 mECU. Uganda Electricity Board 2 mECU. Supply and erection of 33 KV electrical distribution lines. Project stage: identification. 5th EDF.

Animal Disease Control Project. Resp. Auth.: Ministry of Livestock and Fishery. Total estimated cost 11 mECU. EDF 7.3

mECU. Local 3.7 mECU. Re-establishment of veterinary extension service. Repair of cattle dips, spray races. Tse tse control programme. T.A. For medical products and vaccines purchase during first six months, restr. tender. For equipment material, transport, int. tender. Date foreseen for financial decision april '82. 4th EDF.

T.A. to the Uganda Development Bank. Resp. Auth.: Uganda Dev. Bank. 2 experts. 1 year, renewable. Short-list to be done on may '82. Project stage: identification. 5th EDF.

UPPER VOLTA

Stock-farming in Hauts Bassins and Comoé ORD. Resp. Auth.: Ministère de l'Agriculture (Direction services élevages). 1.961 mECU. Improvement of traditional breeding conditions and continued development of animal-drawn tillage. Various works and supplies: direct agreement. Supply of means of transport: int. tender, 1st quarter '82. TA: G.Z.T. (D). 4th EDF.

Mine of Poura rehabilitation. Resp. Auth.: Ministère du Commerce, du Développement Industriel et des Mines. Estimated Cost: 46.1 mECU. EDF (4th EDF): 3.55 mECU for road and power station. Int. tender for supply of 4 generator 900 KW: launched august '81. (5th EDF). Estimated 4.14 mECU for assessment of the worker's town. Study underway. Other fundings: CCCE 9.3 mECU, BOAD 3.1 mECU, private investors 2 mECU, Coframines and others 2.8 mECU, IDB 2.7 mECU, Local 8.3 mECU. Project on appraisal. 4th and 5th EDF.

Improvement of Dakiri plain. Resp. Auth.: Ministère du Développement Rural. 1.838 mECU. Hydro-agricultural improvement (± 200 ha). Irrigation and drain network. T.A. and monitoring. Works: acc. tender, 2nd half '82. T.A. direct agreement. Date financial decision, february '82. 5th EDF.

Extension of Lycee Technique de Ougadougou. Resp. Auth.: Ministère de Travaux Publics. Building of the boarding-school for 360 students. Works, supply of equipments. T.A. Project stage: identification. 5th EDF.

Kompienga Dam. Resp. Auth.: Ministère des Travaux Publics des Transports et de l'Urbanisme. Cofinanced project. Estimated cost ± 84 mECU. Earth-dam construction, access road non asphalted ± 18 kms, two groups of alternators 7800 KVA each, transmission power lines. Works: restr. tender after prequalification. Prequalification on the way. Project on appraisal. 5th EDF.

Development of the Douna plain. Resp. Auth.: Ministère du développement rural. Estimated cost 10 mECU. Irrigation and draining works, supply of equipments, inputs and T.A. Project stage: identification. 5th EDF.

Volta valleys assessment. (A.V.V.) 2nd part. Improvement of the Mankarga development unit. Resp. Auth.: Ministère du Développement Rural. 4.450 mECU. Works: feeder roads, soil preparation, waterpoints,

rural and social building). Monitoring and training for country-groupings. T.A.: Project on appraisal. Date foreseen for financial decision July '82. 4th EDF.

Fada N'Gourma - Piega Road. 60 km. Int. tender launched may '82. 5th EDF.

WESTERN SAMOA

Oil and Cake storage and handling facilities for the copra mill. Resp. Auth.: Samoa Coconut Products Ltd. 0.850 mECU. Storage tanks for copra oil and handling equipment. Shed for storage of pelletized cake. Study for supplies: Proses (Malaysia) financed by ADB. Study to be done for sheds. Short list not yet drawn up. Works: acc. tender 2nd half '81. Supplies: int. tender, '82. 5th EDF.

Sauniatu Hydro Electric Scheme. Resp. Auth.: Electric Power Corporation (EPC). Estimated Cost 7.1 mECU. EDF 4.1 mECU, EIB 3 mECU. Two power station of 1.75 MW each. Headpond, tunnel, penstock powerhouse with turbines and generators and transmission lines. Equipments, supervision of works and training. Design study completed by Mander, Raikes and Marshall (UK). Preliminary works and access road: acc. tender 2nd half '81. Main civil works: int. tender after prequalification. Prequalification: launched august '81. Int. tender: '82. Supplies: int. tender: launched march '82. Supervision of works: in '82. 5th EDF.

VANUATU

Rice study. Resp. Auth.: Ministry of Agriculture. Feasibility study on hand at Big-Bay-Santo. GITEC (D). 5th EDF.

Coco-trees development. Resp. Auth.: Ministry of Agriculture. Estimated cost 1.885 mECU. Works, supply of transport and equipment and agricultural inputs. T.A. and training. Project on appraisal. 5th EDF.

Road South Malekula. Earth road 67 km. Study on the way: CONSULINT (I). Works: int. tender or acc. tender to be decided on 2nd half '82. Project on appraisal. 5th EDF.

ZAIRE

Extension of Kinoisé market garden's. Resp. Auth.: Département de l'Agriculture (Centres des Produits maraichers: CECO-MAF). 7.880 mECU. EDF 4.85 mECU. FAC and local 3.03 mECU. Projet in execution. 4th EDF.

Akula-Gemena road. Resp. Auth.: Commissariat aux Travaux Publics. Upgrading and asphaltting of the road (115 km). Economic study: Bureau SPE (Local). Technical study: LUXCONSULT (Lux). Project on appraisal. 5th EDF.

Thé Butuhé. Resp. Auth.: Département de l'Agriculture (Commission Agricole du Kivu). Estimated Cost: 2.5 mECU. Strengthening and prosecution existing projects. T.A. for management and trading. Project stage: identification. 5th EDF.

Mwebe-Batshamba Road. Resp. Auth.: Commissariat aux Travaux Publics. Part

(81 km) of the national road Matadi-Shaba. Prequalification launched in July '81. Int. tender foreseen on 2nd quarter '82. Date foreseen for financial decision 3rd quarter '82. Project on appraisal. 5th EDF.

Kalemie port rehabilitation. Resp. Auth.: Département des Transports et Communications. Estimated cost not available. Study on the way by CADIC (B). 4th EDF regional. Project stage identification. 5th EDF.

Banana deep water port. Resp. Auth.: Département des Transports et Communications. Feasibility study: SEMA-TRACTION-NEL-OTUI (F.B.F.). 4th EDF. Complementary technical study on 5th EDF cofinanced with bilateral aid F-I-B-D. Project stage: identification. 5th EDF.

Cacao-trees at Bulu. Resp. Auth.: CACAOZA-Département de l'Agriculture. Strengthening and continuation existing operations. Project stage: identification. 5th EDF.

Palm-trees at Gosuma. Resp. Auth.: PALMEZA-Département de l'Agriculture. Strengthening and continuation existing operations. Project stage: identification. 5th EDF.

Retraining of teaching and technical staff attached to the National Vocational Training Habitants. (I.N.P.P.). Resp. Auth.: Direction I.N.P.P. 0.730 mECU. Training, T.A. and supply of equipment. T.A.: direct agreement. Supply: int. tender in '82. Date financial decision February '82. 4th EDF.

Lubutu-Oso-Walikale Road. Resp. Auth.: Commissariat aux Travaux Publics. Prequalification launched January '82. Int. tender foreseen on 3rd quarter '82. Project on execution. 4th EDF.

Health centres equipment in 5 rural areas: Lighting and refrigerators with solar energy feeding. Resp. Auth.: Département Santé. 1.7 mECU. Supplies: int. tender foreseen 2nd half '82. Date foreseen for financial decision 3rd quarter '82. 5th EDF.

Mine industry (copper-cobalt) rehabilitation. Resp. Auth.: GECAMINES. Estimated cost EDF part: 40 mECU. Supply of equipment, int. tender foreseen on 2nd quarter '82. Date foreseen for financial decision July '82. 5th EDF.

Butembo-Beni hydro-electrical development. Preliminary study done by Tracotionnel (B) on local funds. Studies to be done: detailed economical and technical studies. Short-list on the way. Project on appraisal. 5th EDF.

ZAMBIA

Supplementary financing for the construction of five Rural Health Centres. Resp. Auth.: Ministry of Health. 2 mECU. Works: direct labour. Supply of equipment and medical stores: acc. tender or direct agreement in '82. 5th EDF.

Maize development project. Resp. Auth.: Ministry of Agriculture and Water

Development. Total cost 6.540 mECU. EDF 5.55 mECU, Rocaf 0.99 mECU. Works: construction housing and office accommodation, marketing depots, feeder roads. Supply: 4 WD vehicles, motorcycles and bicycles. T.A. Works: acc. tender or direct agreement end 81 or 1st quarter '82. Supplies: int. tender in '82. T.A. short-list already drawn up. 5th EDF.

Zambia Marketing and Trade Promotion. Resp. Auth.: Ministry of Commerce and Industry. Zambian Export Promotion Council. 0.795 mECU. Product Development and Marketing. Marketing management. Trade Fairs — Tourism planning and promotion. Contracts by direct agreement. 5th EDF.

Rice Development Project. Resp. Auth.: Ministry of Agriculture and Water Development. 4 mECU, EDF Part. Local 1.135 mECU. Works: access roads, marketing depots, housing. Supply of equipments, agricultural inputs, T.A. Supply of vehicles: int. tender. Works: acc. tender or direct labour. T.A. short-list already drawn up. Date financial decision March '82. 5th EDF.

Animal Vaccine Unit Production. Laboratory construction. Supply of equipment and T.A. Estimated cost 3.560 mECU. EDF 2 mECU, local 1.560 mECU. Project on appraisal. 5th EDF.

Mkushi electrification. Estimated cost 6.07 mECU. EDF 3.07 mECU. Cofinancing needed. Study on hand: MERTZ McLENNAN (UK). Project stage: identification. 5th EDF.

Mine industry (copper-cobalt) rehabilitation. Resp. Auth.: ZAMBIA Cono. Copper Mines at Lusaka. Total estimated cost 85.346 mECU. EDF part 55 mECU. Supply of equipment int. tender 1st quarter '82. 5th EDF.

T.A. to the Development Bank of Zambia. Resp. Auth.: Dev. Bank of Zambia. 0.540 mECU. Short-list already drawn up. 5th EDF.

Rural township Water Supply. Resp. Auth.: Ministry of Agriculture and Water Development. 5.200 mECU. Construction and supply of equipment. Works and supplies: int. tender on 2nd half '82. Date financial decision may '82. 5th EDF.

ZIMBABWE

Educational Facilities and Equipment. Resp. Auth.: Ministry of Manpower Planning and Development. 3 mECU. Building of Technical College and supply of equipment and furniture. Works: acc. tender. Supplies: int. tender. Date financial decision: 1st quarter '81. 5th EDF.

Rural Clinics. Resp. Auth.: Ministry of Health. 4.5 mECU. Construction and equipment of 115 rural clinics and 230 staff houses. Works: direct labour or direct agreement. Equipments: int. tender. Date financial decision: 1st quarter '81. 5th EDF.

Coal study. Resp. Auth.: M.E.P.D. Cofunding EDF-EIB. EDF 0.500 mECU. EIB

0.400 mECU. Restr. tender after short-list. Short-list already drawn up. 5th EDF.

Countries acceding to Lomé Convention

BELIZE

Three junior secondary schools. Resp. Auth.: Ministry of Education and Ministry of Works. 1.250 mECU. Technical and practical skills in rural areas. Classroom blocks, workshop blocks, principal's house. Works: direct labour. Supplies: furniture and equipment, restr. tender or direct agreement in '82. Project in execution. 4th EDF.

Overseas Countries and Territories (OCT)

NETHERLANDS ANTILLES

St Martin Airport. Resp. Auth.: Departement voor ontwikkelingssamenwerking. 7.292 mECU. Construction of new air terminal. Study and works. Study: execution, Flughafen Frankfurt (D). Works and supplies in '82. 4th EDF.

T.A. To the Banque Antillaise de Développement. Resp. Auth.: Departement voor Ontwikkelingssamenwerking. 0.583 mECU. Development of S.M.E. and 3 experts for the management and direction of the Bank. Date foreseen for financial decision. July '82. 5th EDF.

FRENCH POLYNESIA

Tahiti territorial abattoir. Resp. Auth.: Service de l'Economie Rurale, Papeete (Tahiti). Secrétariat d'Etat des Départements et Territoires d'Outre-Mer, Délégation de la Polynésie Française, Paris. 0.850 mECU, EDF 0.730 mECU, Ministère Français de l'Agriculture 0.120 mECU. Modern abattoir to replace old slaughterhouses and improve hygienic conditions for meat provisioning. Capacity 2 000 cattle and 13 000 pigs per year. Works: int. tender 1st quarter '82. 4th EDF.

Gas-generators and electro-generators powerstations in the Touamotou Islands. Resp. Auth.: Assemblée Territoriale des Touamotou. 0.460 mECU. Supply of gas-generators fed with charcoal from coconut waste and coco-trees wood waste. Int. tender foreseen 2nd half '82. Date foreseen for financial decision 3rd quarter '82. 4th EDF.

REUNION

Hydro-agricultural development of Bras de Cilaos. Resp. Auth.: Ministère de l'agriculture. 2.650 mECU. Installations of a first section of water-supply network. Supplies and ductlaying and accessories, int. tend. in '82. 4th EDF.

WALLIS and FUTUNA ISLANDS

Enlargement of the Mata Utu quay in Wallis. Resp. Auth.: Administration territo-

riale. 1.195 mECU. Reinstatement and enlargement to 75 m length. Works: local tender mid-'82. 5th EDF.

Futuna electrification. Resp. Auth.: Administration Territoriale. Estimated Cost 1.305 mECU. Small concrete dam with water line of 1000 m and a forced line of 100 m. Power station with turbo-alternator of 180 KW and 3 diesel generators for emergency. Transport lines M.T. and L.T. Works: local tender for civil works. Equipments: int. tender 2nd half '82. 5th EDF.

NEW CALEDONIA

Inshore aquaculture. Resp. Auth.: Direction territoriale des Services Ruraux. Estimated cost 0.459 mECU. Creation of pilot fishery station. Supply of equipment. Modalities to be decided. Date foreseen for financial decision 2nd half '82. 5th EDF.

Loyauté Islands water supply. Resp. Auth.: Direction Territoriale des Services Ruraux. 0.900 mECU. Constructions and drills and small water supply networks. Date foreseen for financial decision 2nd half '82. 5th EDF.

Reafforestation programme. Resp. Auth.: Territoire de la Nouvelle Calédonie des Eaux et Forêts. Estimated total cost 4.7 mECU. EDF part ±3 mECU. Cofundings with France, CCCE (F) and Local. 3 000 ha plantation "Pin de Caraïbes" with all necessary infrastructure and investments. Project on appraisal. 5th EDF.

BRITISH VIRGIN ISLANDS

East End Water Supply Project. Resp. Auth.: Public Works Department (P.W.D.) Estimated Cost 0.530 mECU. EDF 0.500 mECU. Local 0.030 mECU. Construction of 4 wells, 900 m³ reservoir and distribution pipework. Works by direct labour. Equipments: int. or restr. tender or direct agreement concerning importance. Date financial decision, may '82. 5th EDF.

Regional Projects

BELIZE

Caricom grains project, pilot farm. Resp. Auth.: Caribbean Development Bank. Estimate 2.145 mECU. EDF 1.826 mECU. Works: acc. tender 1st quarter '82. Supplies: equipment and vehicles: int. tender 2nd half '82. 4th EDF.

COMMISSION DU FLEUVE NIGER (CFN) IN NIAMEY

Hydrological forecast system of river Niger basin. Resp. Auth.: CFN. 6.8 mECU. EDF 1.5 mECU. UNDP, OPEC, CFN, member states 5.3 mECU. To provide CFN possibilities to take hydrological dates on the whole Niger basin. Supplies: hydrometrical instruments, means of transport, equipment for teletransmission, supplies, int. tender in 1981. T.A.: supplied by Organisation Mondiale Météorologique (UNDP funds), direct agreement. 4th EDF. Phase II. Estimated cost 4.5 mECU. EDF 1.5 mECU. Project stage: identification. 5th EDF.

DJIBOUTI — ETHIOPIA

Djibouti-Addis railway. Resp. Auth.: Compagnies chemin de fer 2 countries. 9.8 mECU Railway, short-term, rehabilitation. Supply of transport and telecommunication equipment. Int. tender launched may '82. 4th EDF.

ETHIOPIA — SUDAN

Telecommunications project. Technical study done by U.I.T. Economical and commercial study to be done. Short-list not yet drawn up. 5th EDF.

O.C.A.M.

Building and equipment of Institut Africain et Mauricien de Statistiques et d'Economie Appliquée in Kigali. Resp. Auth.: I.A.M.S.E.A. Total estimated cost 4.8 mECU. EDF part 3 mECU. Pedagogical, administratives and hostel buildings (5,000 m²). Correspondent equipment supply. Date foreseen for financial decision 4th quarter '82. 5th EDF.

COUNTRIES MEMBERS OF CEDEAO

Informations and investments promotion project. Resp. Auth.: CEDEAO Secretariat. 1.000 mECU. Actions to promote firm implantation in the West-Africa countries. Project on appraisal. Date foreseen for financial decision July '82. 5th EDF.

COUNTRIES MEMBERS OF ORGANISATION AFRICAINE POUR LA PROPRIETE INTELLECTUELLE (O.A.P.I.)

Building and equipment of Centre Africain de Documentation et Information en matière de Brevets. Resp. Auth.: O.A.P.I. 1.207 mECU. Construction of 1,358 m² of buildings, and supply of equipment. Works: contracts in awarding. Supplies: int. tender 1st half '83. Project in execution. 5th EDF.

COUNTRIES MEMBERS OF CEAO

ESITEX Segou (Mali). Resp. Auth.: CEAO Secretariat. Management training for textile industry. Complex construction in Segou. Supply of equipment. Project stage: identification. 5th EDF.

Ecole des Mines et de la géologie, Niamey. Resp. Auth.: CEAO Secretariat. Creation of a school for 350 students coming from CEAO countries. Estimated total cost 28 mECU. EDF 7 mECU. Cofundings with FAC-FAD-D. Project on appraisal. 5th EDF.

GAMBIA — SENEGAL (O.M.V.G.)

Bridge barrage on the river Gambia. Resp. Auth.: Ministry of Works and Ministère des Travaux Publics. Estimated cost in 78: 60 mECU. Foreseen funding: F.R.G. 20 mECU. Canada 21.7 mECU, USA 11/22 mECU, Technical study: DHV-Rijkswaterstaat-Waterloopkundig Laboratorium Delft (NL). Project stage: identification. 5th EDF.

Agronomical study for the area concerned by the bridge barrage. Short-list already drawn up. 5th EDF.

GUYANA — SURINAM

Guyana — ferry-link. Resp. Auth.: Ministère des Travaux Publics and Ministerie van Openbare Werken. Link ferry on Corentine river. Study on the way. Project on appraisal. 4th EDF.

SIERRA LEONE — LIBERIA — GUINEA

T.A. to the Mano River Union. Industrial Project Development Unit. Phase II. Resp. Auth.: M.R.U. Secretariat. Estimated cost 1.500 mECU. Identification and evaluation of industrial projects, legislation harmonizing and business support. 6 long-term experts and 2 short term experts. Date foreseen for financial decision July '82. 3th EDF.

UPPER — VOLTA — NIGER — TOGO

Fada-Border Niger Road. Resp. Auth.: Ministère des Travaux Publics. Estimated cost: 28 mECU. Construction and surfacing of the road for 171 km. Possibility of partial financing on 5th EDF. ± 10 mECU. Economic and practical study completed. Int. tender foreseen 2nd quarter '82. Project on appraisal. Probable cofunding with F and BAD-EA. 5th EDF.

TOGO — BENIN

Integrate development of the Mono Valley. Resp. Auth.: Ministères des Travaux Publics. Estimated cost: 170 mECU. Construction of a dam and a hydro-electric power plant of 2 x 30.7 MW. Foreseen funding: World Bank, EEC (EDF + EIB), France, FRG, Canada, ADB, UNDP. Feasibility study done. Completion envisaged 1982/85. Project on appraisal. 5th EDF.

BENIN — IVORY COAST — NIGER — TOGO — UPPER VOLTA

Regional training centre for road maintenance in Lomé-Togo. (CERFER). Resp. Auth.: Secretariat CERFER. Training. T.A. and scholarships. Estimated cost 0.900 mECU. Project stage identification. 3rd, 4th and 5th EDF.

RWANDA — ZAIRE

Hydro-electric development «Ruzizi II». Resp. Auth.: Ministères des Travaux Publics. Estimated cost: 60 mECU. Economic and technical studies (4th EDF): Bureau Tractionnel (B) and R.R.I. (D). Construction of a central hydro electric plant of 35 MW. Foreseen funding: EDF, ADB, World Bank, B, I, BDEGL, EIB. Civil works supervision: EDF and World Bank. Equipments: the others. Works: int. tender prequalifications. Prequalification made. Project on appraisal. 5th EDF.

Methane gas from Lake Kivu. Resp. Auth.: CEPGL and Commission mixte de 2 pays. Pre-feasibility study done. (Studies 4th EDF). Feasibility study foreseen with EDF, B, EIB fundings. Project stage: identification, 5th EDF.

ZAIRE — RWANDA — BURUNDI

Study to integrate gas-generators for agro-industrial and plant wastes. Resp.

Auth.: Electricité de Grands Lacs (E.G.L.) 0.300 mECU. Supply of 6 gas-generators. Two for each countries. Restr. tender foreseen on 3rd quarter '82. 4th and 5th EDF.

NIGER BASIN AUTHORITY

Protection and reafforestation in the "Haut Bassin Versant du fleuve Niger in Guinea". Works, supplies and T.A. Estimated total cost 1.5 mECU. Project stage: identification. 5th EDF.

COUNTRIES MEMBERS OF CIADFOR

Extension of A.N.F.P.P. (Agence Nationale de formation et de Perfectionnement Professionnels) in Libreville. Extension and modernization and new complex building in Oloumi. Project stage: identification. 5th EDF.

SENEGAL — GUINEA

Tambacounda-Labe road Resp. Auth.: Ministère des Travaux Publics. Upgrading and asphaltting of the road (455 km). Economic study: SONED (SE). Technical study to be done. Short list not yet drawn up. Project on appraisal. 4th EDF.

REGIONAL PROJECT

(WESTERN SAMOA — FIJI — SOLOMON — KIRIBATI — TUVALU — PAPUA NEW GUINEA — TONGA)

Renewable energy development project in the South Pacific. Resp. Auth.: SPEC (South Pacific Bureau for Economic Cooperation). 6.2 mECU. Creation of pilot units for ocean energy, gas, small stations 25 kW fed with wood waste. Photovoltaic generators 20 kW and wind-generators 15 kW. Prefeasibility study on the way: LAHMEYER and DORNIER (D). Works, supply and T.A. Supplies: int. tender 1st half 1983. T.A. end 82 or 1st quarter 83. Project on appraisal. 5th EDF.

TOGO — MALI — UPPER VOLTA — NIGER — CHAD

Agricultural produce regional transit centre. Resp. Auth.: Ministères du Plan and Ministère Affaires Economiques for Niger. Estimated total 7 mECU with cofunding. Harmonization of stocking possibilities for the population and trade improvement. Technical and economic feasibility study: Bureau SATEC (F). Project stage: identification. 4th and 5th EDF.

SOUTHERN AFRICA

Foot-and-mouth disease prevention. Resp. Auth.: Development Committee. Study to be done: Feasibility. Short-list already drawn up. Project stage: identification. 4th EDF.

PACIFIC ACP COUNTRIES

Forum Fisheries Agency Headquarters. Resp. Auth.: South Pacific Bureau for Economic Cooperation (SPEC). 0.650 mECU. Creation of an international fisheries resources management agency. Works by acc. tender. Supply of equipment restr. tender. Supply of computer and data process-

ing equipment, int. tender. Date decision may '82. 4th and 5th EDF.

Pacific Forum Line: containers. Resp. Auth.: S.P.E.C. Estimated total cost 2.700 mECU. EDF 1 mECU. Australia 1.700 mECU. Purchase of 142 containers equipped with integral refrigeration units. Project stage: identification. 5th EDF.

BOTSWANA — ZIMBABWE

Regional project foot-and-mouth disease. Resp. Auth.: Ministry of Agriculture. Estimated total cost 24.510 mECU, EDF 14.330 mECU, GOB 8.167 mECU, GOZ 2.013 mECU. Supply of equipment and vaccines. Date foreseen for financial decision 2nd quarter '82. 5th EDF.

FIJI — KIRIBATI — PAPUA NEW GUINEA — TUVALU

Telecommunication project. Resp. Auth.: S.P.E.C. 8.750 mECU. Supply and installation of 2 ground stations standard B for satellite. One in PNG the other in Kiribati. Equipment to extend telex service by satellite in Fiji and radio and telex equipment in Tuvalu. Int. tender foreseen 2nd half '82. Project on appraisal. 5th EDF.

SEYCHELLES — MAURITIUS — COMOROS — KENYA — SOMALIA — TANZANIA — MADAGASCAR

Telecommunications for flying airways in the Indian Ocean. Resp. Auth.: Civil Aviation Departments, Directions de l'Aviation Civile. Estimated cost 10 mECU. Supply and installation of telecommunication equipment. Study: preliminary appraisal, Mr. Durieux and Amory (F). Technical detailed study: SOFREAVIA (F). Int. tender foreseen 2nd quarter '82. Project on appraisal. 4th EDF.

MADAGASCAR-SEYCHELLES

Ecole Maritime de Majunga. Resp. Auth.: Ministère de l'Education. Managerial staff training for mercantile marine and fishery. Supply of a school-vessel and equipment. T.A. Estimated cost 2 mECU. Date foreseen for financial decision may '82. 5th EDF.

ACP STATES

Assistance to the professional ACP-EEC organizations concerned by improvement of the production and products commercialization on foreign markets. Resp. Auth.: COLEACP-FEDEAU. And the association for the improvement of the commercialization of products like coffee, cacao, oleaginous and cotton. 2.770 mECU. Date financial decision, October '81, 5th EDF.

SENEGAL — GAMBIA GUINEA BISSAU

Dakar — Banjul — Bissau Road. Resp. Auth.: Ministères Travaux Publics of the 3 countries. Asphalted road between Mandina Ba (Gambia) and Sao Vicente (Guinea Bissau). 129 km. Estimated cost 30 mECU. EDF 10 mECU. Technical study on hand. Project stage: identification 5th EDF.

COUNTRIES MEMBERS OF CEAO AND CILSS

Construction of Centre Régional d'Energie Solaire (CRES) in Bamako, Mali. Estimated total cost 30 mECU. EDF part. 3.5 mECU. T.A. and equipment. Project on appraisal. 5th EDF.

COUNTRIES MEMBERS OF ECOWAS — CEDEAO

Wireless beam telecommunications. Resp. Auth.: Secretariat Ecowas. Cedeao. Estimated cost 32 mECU. EDF 5 mECU. Equipment: int. tender launched end of february '82. Date foreseen for financial decision July '82. 5th EDF.

EASTERN AFRICA COUNTRIES

Statistical training centre for eastern africa in Tanzania. Resp. Auth.: Secretariat of the centre. 2.0 mECU. Widening of the capacity. Construction of class-room, offices and housing. Project stage: identification. 5th EDF.

COUNTRIES MEMBERS OF ASECNA

Air safety. Resp. Auth.: Asecna Secretariat in Dakar. 10 mECU. Supply and installation of flying assistance equipment for several airports. Project on appraisal. Date foreseen for financial decision July '82. 5th EDF.

DJIBOUTI — ETHIOPIA — KENYA — SUDAN — SOMALIA — TANZANIA — UGANDA

Prevention against noxious migratory animals in eastern africa. Resp. Auth.: Desert Locust Control Organization for eastern africa. Construction of buildings, storage, for pesticide, aircrafts, equipment for vaporization, vehicles and T.A. Total estimated cost 6.634 mECU. EDF 3.2 mECU int. tender for equipment hangar, provisional upon acceptance on 3rd quarter '82. Project on appraisal. 5th EDF.

KENYA — TANZANIA

Regional Health Improvement Project. Resp. Auth.: Ministries of Health. Estimated cost 1.6 mECU. Extension of the regional centre at Nairobi and construction of a centre in Dar-el-Salam, T.A. Works: acc. tender. Contracts: direct agreement. Date foreseen for financial decision, 2nd half '82. 5th EDF.

ZAMBIA — KENYA — UGANDA — SUDAN

Field-oriented research on control of tsetse and livestock ticks of the International centre of insect physiology and ecology (ICIPE) Nairobi-Kenya. 4.4 mECU. EDF part 1.5 mECU. Cofundings with: UNDP-USAID-Switzerland and Netherlands. Supply of equipment and TA. Date foreseen for financial decision september '82. 5th EDF.

COUNTRIES MEMBERS OF SADCC (South African development coordination conference)

Faculty of Veterinary Sciences University of Zimbabwe. Total estimated cost 9 mECU. EDF part estimated at 5 mECU. Construction of a new veterinary faculty as a regional institution within the existing university of Zimbabwe. Works and supplies. Project stage identification. 5th EDF.

COUNTRIES MEMBERS OF CARICOM

Development of the regional trade promotion services in the Caribbean region. Resp. Auth.: Caricom Secretariat. 1.8 mECU. T.A. project. Contract: direct agreement. Date financial decision february '82. 5th EDF.

Assistance to Caribbean Agricultural Research and Development Institute (CARDI). Resp. Auth.: CARDI Secretariat. EDF part 3.035 mECU. T.A. equipment and training. Date foreseen for financial decision 1st half '82. 5th EDF.

Windward Islands Fishing Boat Project. Resp. Auth.: Caricom Secretariat. Estimated cost 0.345 mECU. EDF part 0.275 mECU and 0.070 mECU from sales of boats. Equipment and TA for the construction of about 100 fishing boats and workshop installation. Project on appraisal. 5th EDF.

Regional hotel trade school at St. Lucia. Resp. Auth.: Caricom Secretariat. Estimated total cost 0.900 mECU. EDF 0.200 mECU. Work financed locally. EDF part: supply of pedagogical equipment, furniture and 1 vehicle. Project on appraisal. 5th EDF.

TANZANIA (BURUNDI - RWANDA - ZAIRE - ZAMBIA)

Tanzania Railways Corporation Project (T.R.C.). 10 mECU. Maintenance and improvement of the railway. Works, supply of equipment. Supply: int. tender 2nd half '82. Supervision of works: short list not yet drawn up. Date financial decision march '82. 4th EDF.

BURUNDI - RWANDA - TANZANIA - ZAIRE - ZAMBIA

Dar es Salam port project. Improvement of the transit goods handling facilities, for the Central Corridor transports. Supply of equipment and T.A. Estimated cost 2 mECU. Project stage identification. 5th EDF.

TANZANIA - UGANDA

Transport project Lake Victoria. Improvement of the existing wagon ferry terminal facilities in Jinja, Mwanza, Bukoba and Musoma ports. Estimated cost 2 mECU. Project stage identification. 5th EDF.

MEDITERRANEAN COUNTRIES

ALGERIA

Livestock development study for vine-growing reconversion areas. Resp. Auth.:

Ministère de l'Agriculture et de la Révolution Agraire. 0.095 mECU. Possibilities for development of dairy cattle. Study to determine project contents: SCET International (F) Project stage: identification.

Study for artificial insemination development in Algeria. Resp. Auth.: Ministère de l'Agriculture et de la Révolution Agraire. 0.080 mECU. Study to establish an artificial insemination service. Short list already drawn up. Project on appraisal.

Scientific cooperation programme with O.N.R.S. and trainers' training. Resp. Auth.: Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (M.E.S.R.S.) 4.300 mECU. Scholarships, T.A. experts and supply of equipment. For scientific equipment int. tender. Date financial decision october '81.

Rural managers' training. Resp. Auth.: Ministère de l'Agriculture, de la Révolution Agraire et des Forêts. 4 mECU. T.A. with trainers and technical equipment. Supplies: direct agreement. T.A.: Contracts: from '81 to '83. Date for financial decision october '81.

Contribution towards the extension of two training centres for fishermen (Annaba and Beni-Saf). Resp. Auth.: Ministère des Transports et de la Pêche. Secretariat d'Etat à la pêche. 0.600 mECU. Supply of pedagogical equipment and T.A. Supply: int. tender. launched in november '81 T.A.: short-list not yet drawn up.

EGYPT

Soil improvement programme in Kafrel-Sheikh Governorate. Resp. Auth.: Executive Authority for Land Improvement Projects (EALIP). Provisional amount 8 mECU. To reclaim an area of 65 000 acres of saline soil, located in Hamoul district of the Kafrel-Sheikh Governorate. Project on appraisal. Date foreseen for financial decision septem-ber-october '82.

Improved of agricultural input storage facilities in the Daqhalia Governorate. Resp. Auth.: Principal Bank for Development and Agricultural Credit. EEC Contribution 6 mECU. Construction of 13 new ware houses on prefabricated steel of 1 700 m² each providing a total capacity of 27 000 T. Works: int. tender 2nd half '82. Date foreseen for financial decision june '82.

Developing Vocational Training for Industrial Trades. Resp. Auth.: Ministry of Industry and Mineral Resources. (Productivity and Vocational Training Department - PVT.D.) 2 mECU. Community's contribution over a period of 3 years for TA and equipment. T.A.: direct agreement in '81. Equipments: int. tender launched in december '81.

Helwan waste water Project. Resp. Auth.: Government of Egypt. Estimated Cost 125.040 mECU. EEC Contribution estimated 31.540 mECU. Nederland 2.660 mECU. Construction of a sanitation system within an area of 9,500 ha. Collector mains, pumping stations and treatment

works. Works and supplies: int. tender 1st half 1982.

Intervention programme for investments promotion and for cooperation at companies level. Resp. Auth.: Ministry of Economy and External Trade, Ministry of Industry and Mineral Resources. 2 mECU. T.A., training and investment promotion. Project on appraisal.

Egyptian Renewable Energy Development Organisation. EREDO. Resp. Auth.: Egyptian Government. Estimated total cost 10.741 mECU. EEC contribution 7.7 mECU. Construction and equipment for the centre. Works and supplies: int. tender in '82. Date foreseen for financial decision 1st quarter '82.

JORDAN

Assistance to the Jordan Valley Farmers' Association. Provisional amount 0.05 mECU. Resp. Auth.: National Planning Council (NPC) and Jordan Valley Farmers' Association (JVFA). Vegetable seeding propagation unit. Supply: int. tender launched on june '82. Project in execution.

1 Secondary Industrial School (SIS). Resp. Auth.: National Planning Council (NPC) and Ministry of Education. EEC 0.950 mECU. School for technical education at secondary level at Mafraq. Buildings to be financed by Jordan. Training and TA programmes also. Study: to identify and define project: Tema Consultant (I). Financial decision: november '80. Supply: int. tender launched august '81.

2 Trade Training Centres (TTC). Resp. Auth.: National Planning Council (NPC) and Vocational Training Corporation. Cost estimate 1.650 mECU for EEC. The TTCs offer apprenticeship in cooperation with local trade and industry. One TTC for about 400 boys at Zarqa. One TTC for about 400 girls in Amman. Buildings to be financed by Jordan. Training and TA programmes also. Study to identify and define project, TEMA Consultant (I). Supply: int. tender for Zarqa launched on february '82. Project in execution.

Faculty of Engineering and Technology. University of Jordan. Resp. Auth.: Ministry of Education. EEC-Contribution: 6.68 mECU. Supply of Laboratory and workshop equipment and T.A. over 5 years. Jordanian Government will finance buildings. Supplies: int. tender launched in august '81 and february '82 T.A.: Contracts in '81 and '82.

Faculty of Science-Yarmouk University. Resp. Auth.: Ministry of Education. 2.5 mECU. Supply of equipment, T.A. and training. Supplies: int. tender launched in august '81. T.A. contracts in '81 and '82. Project in execution.

2 Vocational Training Schools. Resp. Auth.: National Planning Council (NPC) and Vocational Training Corporation. Estimated cost. 1.200 mECU. (EEC part). Construction and equipment 1 school for 700 boys at Zarqa and at Amman for 700 girls. Training and T.A. Date foreseen for financial decision 1st half '82.

Jordan Valley Transplant Production Unit. Resp. Auth.: Jordan Valley Authority. Estimated total cost 2.210 mECU, EEC part 0.950 mECU. Supplies, construction greenhouses, irrigation. T.A. Supply: int. tender, 1st half '82. T.A.: direct agreement. Date financial decision January '82.

LEBANON

Industrial planning and industrial census. Resp. Auth.: Ministère de l'Industrie. 0.518 mECU. Foreign expert to supervise local experts for census. Mission in Lebanon 2 months EEC contribution covers all expenses for foreign expert and $\pm 50\%$ of total cost of the project. Project on appraisal.

Aid for the Union Nationale de Cr dit Coop ratif (UNCC). 1.400 mECU. Line of credit to the UNCC and T.A. Date foreseen for financial decision 1st quarter '82.

Document automatization for the Chambre de Commerce et de l'Industrie de Beyrouth (CCIB). Resp. Auth.: C.C.I.B. 0.240 mECU. Supply and T.A. For equipment int. tender in '82 or '83. Date foreseen for financial decision 2nd half '82.

MOROCCO

Nador and Safi water supply. Resp. Auth.: Office National de l'Eau Potable (ONEP). Ministère de l'Equipelement et de la Promotion Nationale. Estimated cost 20.890 mECU, EEC 15.5 mECU, Local and Saudi Fund for Development 5.390 mECU. SAFI: water supply extension, partly service main, partly treatment and pumping station. NADOR: Regional water supply realization, service mains and treatment and pumping station. Works and supplies except pumping station and electrical connections: several int. tenders in 1981. For Nador launched in July '81.

Intervention for Laboratoire Officiel d'Analyses et de Recherches chimiques de Casablanca. Resp. Auth.: Ministère de l'Agriculture. 1.200 mECU. Equipments: int. tender in '81. T.A. and training. T.A.: ICON INST. (D). Project on appraisal.

Interventions for Laboratoire de Technologie des c reales de Rabat. Resp. Auth.: Ministère de l'Agriculture. 0.790 mECU. Equipment, T.A. and training. Supply by restr. tender or direct agreement. T.A.: short-list not yet drawn up. Date financial decision, November '81.

SYRIA

Scientific and Technical Cooperation with CERS. (Centre d'Etudes et de Recherches Scientifiques.) EEC part 4.820 mECU. Studies, T.A., training and supply of scientific equipment. Last int. tender launched January '82 for teledetection.

Assistance to the Damascus and Aleppo Intermediate Institutes of Technology. (CIIT.) 4 mECU. Supply of equipment, T.A. and training. Supply: int. tender foreseen 1st half '82.

TUNISIA

Sewerage scheme for 17 towns. Resp. Auth.: Office National d'Assainissement (ONAS). Estimated cost 40 mECU, EEC 24 mECU, Local 16 mECU. Improvement of the sewerage system (mainly for sewerage and rainwater) for 17 towns. Service mains extension, building of purification stations. Study: to define programmes and prepare the implementation project: SAFEGE (F). Funding phase 1 end 1980 (12 mECU). Phase 2: 1st quarter 1982 (12 mECU). Works: int. tenders, several lots in '81. 3 Tenders launched in August '81 and 2 in September '81.

Expansion of industrial development activities. Resp. Auth.: Ministère de l'Industrie, des Mines et de l'Energie. Agence de Promotion des Investissements (API) and the Banque de D veloppement Economique de Tunisie (BDET). 0.630 mECU. TA and studies. Contracts by direct agreement in '81.

Participation to create 3 Training Vocational Centres: in Nabeul, Menzel-Bourguiba, Zaghuan. Resp. Auth.: O.T.T.E.E.F.P. (Office des Travailleurs Tunisiens   l'Etranger de l'Emploi et de la Formation Professionnelle.) EEC Contribution 3.870 mECU. Supply of equipment, T.A. and training. Supplies: int. tender in '81 and '82. T.A.: A.A.B. (D). Project on appraisal.

TURKEY

Beypazari Lignite Project. Resp. Auth.: T.K.I. Estimated Cost 55.7 mECU. EEC 22 mECU, Local 33.7 mECU. EEC part: Equipment supply for: development, mechanised face, conventional face and auxiliary. Equipments: int. tender in '82. Date for financial decision July '81.

Electricity Transmission Line Project. Resp. Auth.: Turkish Electricity Authority. (TEK). Estimated cost 72 mECU. EEC 16 mECU. Upgrading of existing transmission lines and supply of equipment. Construction of new transmission lines. Italian aid foreseen for 5.2 mECU. Supply and works: int. tenders in '82. Date foreseen for financial decision 1st quarter '82.

Beypazari Lignite Project - T.A. Resp. Auth.: T.K.I. 2.6 mECU. T.A. with 7 experts. T.A. and training. Date foreseen for financial decision, 1st quarter '82.

Non-associated developing countries

BANGLADESH

Tea rehabilitation project. Resp. Auth.: Bangladesh Tea Board (BTB). EEC 6.6 mECU, UK and Local 55.680 mECU. Purchase of machinery for tea factories. Call for quotation in EEC member states and Indian subcontinent in 1982 and '83.

Cotton Development project. Resp. Auth.: Cotton Development Board. Esti-

mated Cost: 13.500 ECU. EEC 6.5 mECU, Local 7 mECU. Supply of equipment, T.A. Works. T.A.: short-list already drawn up. Supply int. tender in '82.

Small scale irrigation sector project. Resp. Auth.: Bangladesh Water Development Board (BWDB). Estimated total cost 82 mECU. EEC contribution 12 mECU. Cofinancing with ADB (Asian Dev. Bank). Works, supply of equipment and vehicles, T.A. and supervision. Works: acc. tender. Supplies: int. tender. 3rd quarter '82.

Building of storage for fertilizers. Resp. Auth.: Bangladesh Development Corporation (BADC). Cofinancing: EEC and Netherlands 2 mECU. EEC part: Works by int. tender. Netherlands part: buildings and T.A. Date foreseen for financial decision 3rd or 4th quarter '82.

Development of seed production. Resp. Auth.: BADC. Cofinancing EEC-Germany. Total cost 8.8 mECU. EEC 3.6 mECU. Germany 5.2 mECU. Supplies, T.A. and training. EEC part: seed supply and transport. Date foreseen for financial decision 3rd or 4th quarter '82.

BURMA

Palm oil development. Resp. Auth.: Ministry of Agriculture and Forest. Estimated cost: 16.300 mECU. Financing: EEC 4.9 mECU. Switzerland and local 11.40 mECU. Expanding production for domestic consumption. Supplies and T.A. Supply: int. tender '82 and '83. T.A. short-list already drawn up.

Pump Irrigation. Resp. Auth.: Ministry of Agriculture and Forest. Estimated Cost: 31.5 mECU. ADB 19 ECU. EEC 5.5 mECU. Local 7 mECU. Works: irrigation and related facilities. Supply of equipment and T.A. Works and supplies: int. tenders following EEC and ADB procedures. Supply of pumps: int. tender 3rd quarter '82. EEC part.

INDONESIA

Baturraden Dairy Development. Resp. Auth.: D.G. for livestock services. Estimated cost: 8.385 mECU. EEC 4.4 mECU, Italy 0.410 mECU. Construction, infrastructure, supply of equipment, T.A. Works and supplies: int. tender 1st half '82. T.A.: direct agreement 1st half '81.

Bali Irrigation Sector Project. Resp. Auth.: Ministry of Public Works. DG for Water Resources Development. EEC 12 mECU. ADB ± 37 mECU. Local ± 55 mECU. Rehabilitation and expansion of 50 village-level irrigation scheme, establishment of a water-management training centre, and establishment of climatological stations. T.A. Works: acc. tender.

INDIA

Supply of fertilizer. Resp. Auth.: Ministry of Agriculture. EEC contribution 36 mECU. Supply: int. tender for EEC countries members and India in '82.

PAKISTAN

Baluchistan livestock development. Resp. Auth.: Provincial Government of Balu-

chistan. The Department of Fisheries and Livestock. The Baluchistan Development Authority. EEC 6.7 mECU, ADB 5.8 mECU, Local 1.4 mECU. Development of rangeland for sheep and goat production, construction of kid and lamb fattening units at selected locations, development of the dairy sector, establishment of local vaccine production, construction of a feedmill, training and consultancy services. Works, supplies and consultancy services, int. tenders. Dates unknown. Project managed by ADB.

Emergency Programme-drinking water supplies for refugees areas (NWFP). Resp. Auth.: UNICEF. Estimated Total Cost 6 mECU. EEC 2.7 mECU. Cofinancing with Unicef. Supplies, drilling works, T.A. Supplies: int. tender. Drills: acc. tender. Works: direct labour.

Solar energy for rural areas. Resp. Auth.: Ministry of Petroleum and Natural Resources (DGER). EEC 1.8 mECU. Supply of solar power stations. Int. tender foreseen 2nd half '82.

Karachi fishing port. Resp. Auth.: Fishery department of the Sind Province. Estimated cost 45.5 mECU. ADB 24.8 mECU, EEC 12 mECU, Local 7.1 mECU, Agricultural Development Bank of Pakistan 1.6 mECU. EEC part: new facilities: quay, boat repair yard, fish-shed, dredging. Rehabilitation of existing facilities, equipments and TA. TA: after int. tender prequalification. Prequalification done. Works and supplies in '82.

SRI LANKA

Integrated rural development in the Mahaweli Ganga region. Resp. Auth.: Mahaweli Development Board (MDB). Estimated cost 9 mECU, EEC 2 mECU. Development of 2 326 ha irrigated land and rehabilitation of 1 910 ha deteriorated land. Socio-economical infrastructure to allow settlement of 12 000 rural families. TA: FAO.

Eastern Region rehabilitation project. Ministry of Coconut Industries. EEC 3 mECU, Italy 0.375 mECU, small UK and FAO contributions, balance up to 7 mECU financed by Sri Lanka government. Rehabilitation of coconut plantations devastated by a cyclone and diversification of agriculture in the same region. Feasibility study financed by Italian bilateral aid executed by AGROTEC (I). Works: direct labour Supplies: modalities for tenders to be determined, first quarter '81.

THAILAND

Cooperation training and marketing. Resp. Auth.: National Economic and Social Development Board (NESDB) and Bank for Agriculture and Agricultural Cooperation (BAAC). EEC 3.037 mECU. To provide training facilities for the personnel of agricultural cooperatives and equipment for cooperative marketing unit. Int. tender in '83 for supplies. T.A.: Clear unit (UK).

Rubber smallholdings yield improvement. Resp. Auth.: Rubber Research Centre (RCC). Ministry of Agriculture and Coopera-

tives. EEC 1.8 mECU, Local 1.8 mECU. To introduce and popularize new tapping techniques to improve the yield of old rubber trees before their felling. TA: Harrison Fleming (UK). Supplies: modalities of tenders to be agreed between EEC Commission and government. Tenders in mid '81, '82, '83, '84.

Seed production centre for the Southern Region. Resp. Auth.: Ministry of Agriculture, Estimated Cost: 3 mECU. EEC 2.2 mECU. Construction of a centre for the production and distribution of improved qualities of rice seeds. Equipments and T.A. Works and infrastructure: acc. tender. Equipments: int. tender in '83. T.A.: Euroconsult (NE).

THE PHILIPPINES

Crop protection Programme. Resp. Auth.: Ministry of Agriculture. Estimated cost: 8.596 mECU. EEC 3.5 mECU, F.R.G. and Local 5.096 mECU. Strengthen and expand the existing crop protection service. Works and supplies (vehicles and equipment). Way of execution to be determined.

Palawan Integrated Area Development. Resp. Auth.: National Council on Integrated Area Development (NACIAD). Total cost 78 mECU, EEC contribution 7.1 mECU, ADB 43.05 mECU and GOP 27.85 mECU. Small-scale irrigation works, agricultural intensification and diversification, livestock, transport development, health facilities, training and monitoring. Project duration 1982-1988. Works: partly int. tender, partly direct agreement or acc. tender. Supplies: int. tender or direct agreement. Administrative arrangements, excluding EEC int. tenders, concern full responsibility of ADB. T.A.: short-list already drawn up.

ASIAN DEVELOPMENT BANK (ADB)

Study programme — ADB. Resp. Auth.: ADB. EEC 1 mECU. Studies in the Asian non associated countries. Contract awarded after int. tender concerning EEC consultants and non associated eligible consultants. Date financial decision June '82.

ASEAN

Regional collaborative study on aquaculture. Resp. Auth.: The ASEAN Committee on Food, Agriculture and Forestry (COFAF). EEC 0.300 mECU. To assess the present and future potential of rural aquaculture in the ASEAN countries, and in particular study means of developing existing applied research training and extension facilities in this field. Contract will be awarded by mutual agreement to a mixed team composed of ASEAN and EEC experts. Last quarter of 1980 or '81.

Scientific and Technological Cooperation Programme. Resp. Auth.: ASEAN-Committee on Science et Technology (COST), EEC 2.8 mECU. Training, T.A., Studies, seminars. During 2 years starting from 4th quarter '81. Contracts for T.A. and studies will be negotiated by the Commission of CE after agreement with COST.

Regional Collaborative programme on grain post harvest technology. Resp. Auth.: Sub-committee on Food Handling (SCFH). Cost 4.3 mECU. EEC 4.3 mECU. T.A., training and research. For supplies: int. tender or direct agreement to be determined. T.A. to be decided by S.C.F.H. Short-list not yet drawn up. Date financial decision december '81.

OLADE (LATIN-AMERICAN ORGANIZATION FOR ENERGY DEVELOPMENT)

Pre-feasibility study for geothermics in Haiti. Resp. Auth.: OLADE. EEC 0.530 mECU, Haiti 0.070 mECU. Contracts by direct agreement following EEC regulations. Date financial decision june '82.

HAITI

Integrated rural development of Asile region. Présidence de la République. Estimated cost: 12 mECU. Foreseen financing: EEC 5 mECU, IDB 7 mECU. Feeder roads, rural monitoring, irrigation, social infrastructure. Works by direct labour. Supply: int. tender in '82.

HONDURAS — COSTA RICA

Regional grains stocking and trading programme. Resp. Auth.: (Banco Centroamericano d'integracion economica). Total cost: 21.43 mECU. Financing: EEC 1.80 mECU, IDB 15.18 mECU, BCIE — BANAFOM — CNP 4.45 mECU. In Honduras building of 6 complementary grain-stores, in Costa Rica 7 grain-stores with a capacity of 46 000 tons (total). IDB envisages partial allocation of Costa Rica project for Nicaragua.

LATIN AMERICA

Rural micro-projects. Resp. Auth.: Ministerios de la Agricultura. IDB special fund. EEC contribution for the programme 2 mECU. To be decided.

NICARAGUA

Training assistance to ENABAS (Empresa Nicaraguense de Alimentos Basicos). Resp. Auth.: Ministerio de Comercio Interno and ENABAS. Estimated cost: 0.850 mECU. EEC 0.850 mECU. Training assistance: 2 long-term and 6 short-term experts. Amount foreseen for TA: 0.600 mECU. Construction, equipments, materials: 0.250 mECU (local contracts).

Crop development. Resp. Auth.: Ministerio de la Agricultura e de la Reforma Agraria (MIDINRA). Total estimated cost 19.930 mECU. EEC 7.400 mECU. Studies, monitoring, training, supply of equipment and T.A. Supply: int. tender or acc. tender according to importance or urgency. Contracts: direct agreement by MIDINRA on short-lists from Commission of EC. Date financial decision june '82.

BOLIVIA

Irrigation Programme Altiplano-Valles (Cochabamba). Resp. Auth.: Service National de Développement Communautaire (S.N.D.C.). Cost: 9 mECU. EEC 2 mECU,

KFW (F.R.G.) 6 mECU, Local 1 mECU. Construction of small dams and irrigation canals. Works by direct labour. (Outstanding project).

EQUADOR

Foderuma (rural micro-projects). Resp. Auth.: Ministère de l'Agriculture. Total cost 3.4 mECU. EEC 3 mECU. Local 0.4 mECU. Works, supplies (tractors, lorries, motor-cultivators, waterpumps) training and T.A. Supplies: int. tender in '82. T.A.: direct agreement. Date financial decision, december '81.

COUNTRIES MEMBERS OF PACTO ANDINO

Technical cooperation (industry and economical planning). Resp. Auth.: Junta del Acuerdo de Cartagena, Lima-Peru. Estimated total Cost: 1.7 mECU. EEC 1.1 mECU. To place experts, equipment and T.A. and training at Junta's disposal. Contracts T.A. and experts by the Junta and the Commission of EC. Date financial decision october '81.

Andean Programme for technological development (Rural PADT). Resp. Auth.: Junta del Acuerdo de Cartagena, Lima-Peru. Estimated total Cost: 7.560 mECU. EEC 3.927 mECU. Supply of equipment, training and T.A. Vehicles purchase: int. tender. T.A.: Short-lists to be drawn up by the Commission of EC and decision by the Junta. Date financial decision, december '81.

CENTRAL AMERICAN ISTHMUS (HONDURAS — PANAMA — NICARAGUA — COSTA RICA)

Support for peasant producer association. Resp. Auth.: Instituto Interamericano de Ciencias Agrícolas (I.I.C.A.). Total cost 2.9 mECU. EEC contribution 1.6 mECU. Parallel cofinancing with the French Republic and the governments concerned. T.A. and training. T.A. contracts decided by IICA on basis EEC short-list. Date financial decision december '81.

YEMEN ARAB REPUBLIC (YAR)

Seed production project. Resp. Auth.: central Agricultural Research Station (CARS). Total cost 6.600 mECU. EEC 5.200 mECU. Construction of 5 centres, supply of equipment, T.A. and training. Works: acc. tender. Supplies: int. tender or direct agreement according to importance. T.A. short-list from Commission of EC. Date financial decision june '82.

IRRI — International Rice Research Institute — Los Banos — Philippines.

Research support. Resp. Auth.: IRRI secretariat. EEC contribution 1.5 mECU for genetic evaluation and utilization — water management and training and scholar-ships. Date financial decision december '81.

ICRISAT — Institut of Crops Research for the Semi-Arid Tropics. Hyderabad-India.

Research support. Resp. Auth.: ICRISAT secretariat. EEC contribution 1.2 mECU. Different studies and scholarships. Date financial decision december '81.

CIP — Centro Internacional de la Papa (Potato). Lima-Peru.

Research support. Resp. Auth.: CIP secretariat. EEC contribution 0.800 mECU. Physiology and regional research and training. Date financial decision december '81.

CIAT — Centro Internacional de Agricultura Tropical — Cali — Colombie.

Research support. Resp. Auth.: CIAT secretariat. EEC contribution 1.4 mECU. To improve bean and cassave production. Date financial decision december '81.

ALL NON-ASSOCIATED DEVELOPING COUNTRIES

Administration of Aid — Consultancy services and monitoring. Resp. Auth.: EEC Commission. 2 mECU. Recruitment individual expert, or consultancy firms for diagnostics, projects appraisal, follow up and technical and administrative monitoring of execution. Date financial decision december '81.

Studies and technical assistance. Resp. Auth.: Interested countries and EEC Commission. 1.5 mECU. To finance studies and T.A. Date financial decision december '81.

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BOOKS

Guy BELLONCLE — **Femmes et développement en Afrique sahélienne (Women and development in Sahelian Africa)** — Les éditions ouvrières, 12 av. Sœur-Rosalie, 75621 Paris Cedex 13, France — 212 pages — 1980

In Africa, the woman's social and economic role is a crucial one. Yet there, as and maybe even more than in other places, national and international education and extension schemes pass the vast majority of the female population by.

There are exceptions: Niger, for example, as this book points out in giving an assessment of a 10 year nationwide women's training campaign.

The author was involved in the campaign and he shows us how unusual was this lengthy experiment involving women's status in Niger. The biggest innovation was the link between the practical life of women in the country and the way the methods and educational approach of the motivators evolved.

This work is a critical summary. It describes experiments, outlines training modules for the country's cadres and it presents a series of documents, all combining to show just how women are involved in the life of Niger and what they could do in other countries of Africa if the governments would at last decide to take them seriously.

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Allaitement maternel et santé (Breast feeding and health) — Les Carnets de l'Enfance (55/56) — UNICEF, Villa le Bocage, Palais des Nations, 1211 Geneva 10, Switzerland — 1981

N° 55/56 of this series is on breast feeding and child health. This is an important issue in the developing countries, where breakneck urbanization and many social changes tend to drastically reduce the number of mothers who breast feed, and where malnutrition and poor hygiene are such that natural milk cannot be adequately replaced. In this work, 11 pediatricians and nutritional experts set out the results of their professional experience and their thoughts about the consequences of not breast feeding babies. The worst thing is the high rate of mortality and morbidity in non-breast fed children. Breast feeding, the authors say, is still the best way in poor economic conditions, but the drama is that the decline in its popularity in the developing countries is not accompanied by the expansion of the health services as it is in Europe.

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The label contains computer information we need and we cannot make the change of address without it.

This collection will be very useful for health officers and welfare workers in the developing countries. It also contains a thorough bibliography of publications on the same problem in Africa, Latin America and Asia.

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Jean C. GENESSE — **Côte d'Ivoire: avantages extra-légaux accordés par les employeurs au personnel local et aux expatriés (Ivory Coast: non-mandatory advantages which employers accord to local staff and expatriates)** — 21, rue de la Prairie, 6428 Ham-sur-Heure — 52 pages — 1981

Firms wanting to invest abroad often find it very difficult to get details about the advantages provided for local and expatriate staff as regards social security, retirement, holidays, transport and so on.

The aim of this study is to provide firms in, or wishing to set up in the Ivory Coast with this sort of information. It was produced in two stages. Firstly a survey of the relevant bodies in the Ivory Coast itself and secondly, a survey of firms (51 of the 500 contacted actually replied), carried out in the light of the information initially gathered.

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Le village piégé (The trapped village) — PUF Paris — Institut universitaire d'Etudes du Développement — 24 rue Rothschild, 1202 Geneva, Switzerland — 366 pages — 1979

This collection is in two separate parts. The first deals with the development of a set of houses for staff on an old agro-industrial complex in the Ivory Coast, and the second with various subjects which prolong the architectural scheme as such—the assessment of development projects, the theory and practice of town planning, land ownership in Africa and sugar.

The aim of the book is to provide a range of ideas on a practical problem. It was devised by three young Swiss architects who wanted to get off the beaten track and look for a housing model that was right for the users, members of the Guro tribe in northern Ivory Coast. The exceptional thing about this particular piece of research is the result.

Perhaps they recommend a return to traditional values? By no means. They refuse to take sides in the debate between tradition and modernism and confine themselves to contributing to the discussion.

Their book raises many a question.

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Adewale ADEMOYEGA — **Why we struck** — Evans Brothers Limited, Montague House Russell Square, London WC1B 5BX — 194 pages — 2.95 — 1982

This book tells the story of the first military intervention in Nigerian politics. The coup that took place on January 15, 1966, was conceived and planned together by Major's Nzeagwu, Feajuna and Ademoyega. The execution of the plan had a lightning effect, and the coup provoked a reaction within the first hours of its commencement, opening the floodgate that culminated in the civil war.

Apart from being a vivid account of one of the most historical events in Nigeria up to date, the book is indeed a souvenir, being the original work of the only surviving member of the trio that conceived and planned the coup.

THE COURIER

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Back cover: Technical and financial assistance from the World Food Programme for rural development, mostly involving women in Benin. The search for firewood and building materials for the various developing projects can mean walking considerable distances (FAO photo - J. Van Acker)

