

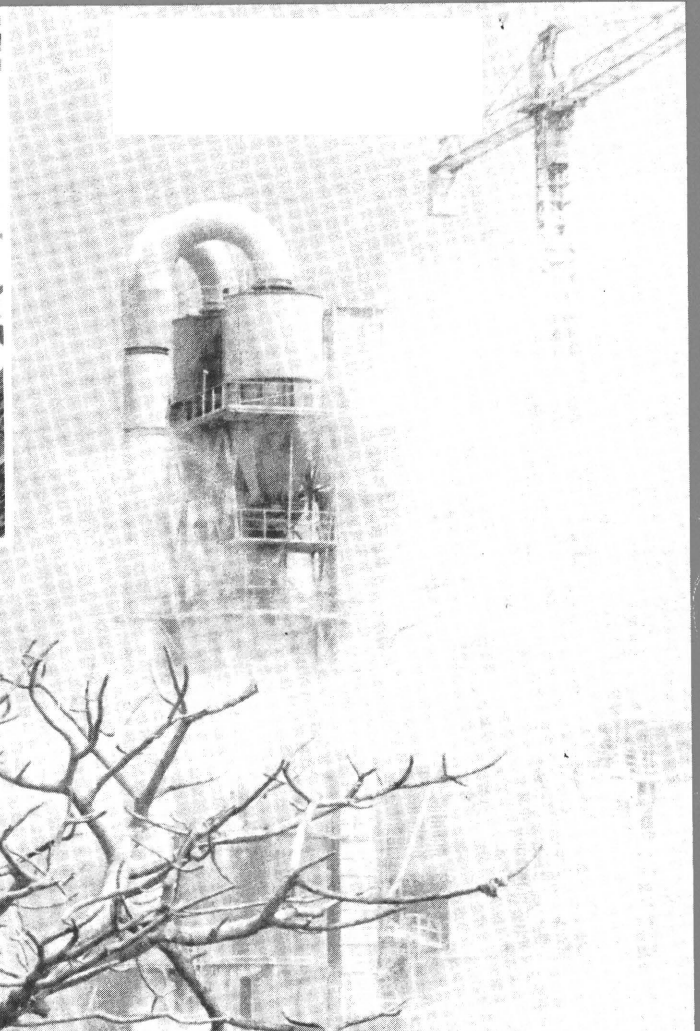
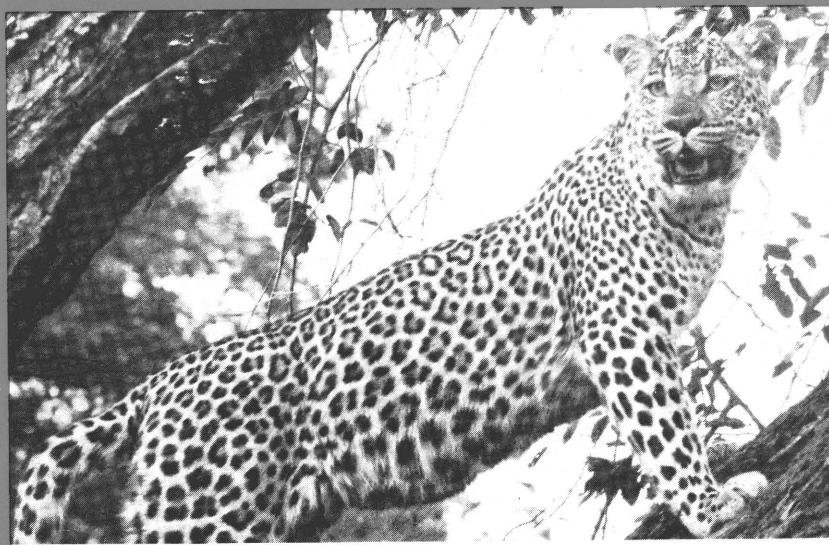


# The Courier

AFRICA-CARIBBEAN-PACIFIC - EUROPEAN COMMUNITY

Published every two months

No 87 - SEPTEMBER-OCTOBER 1984



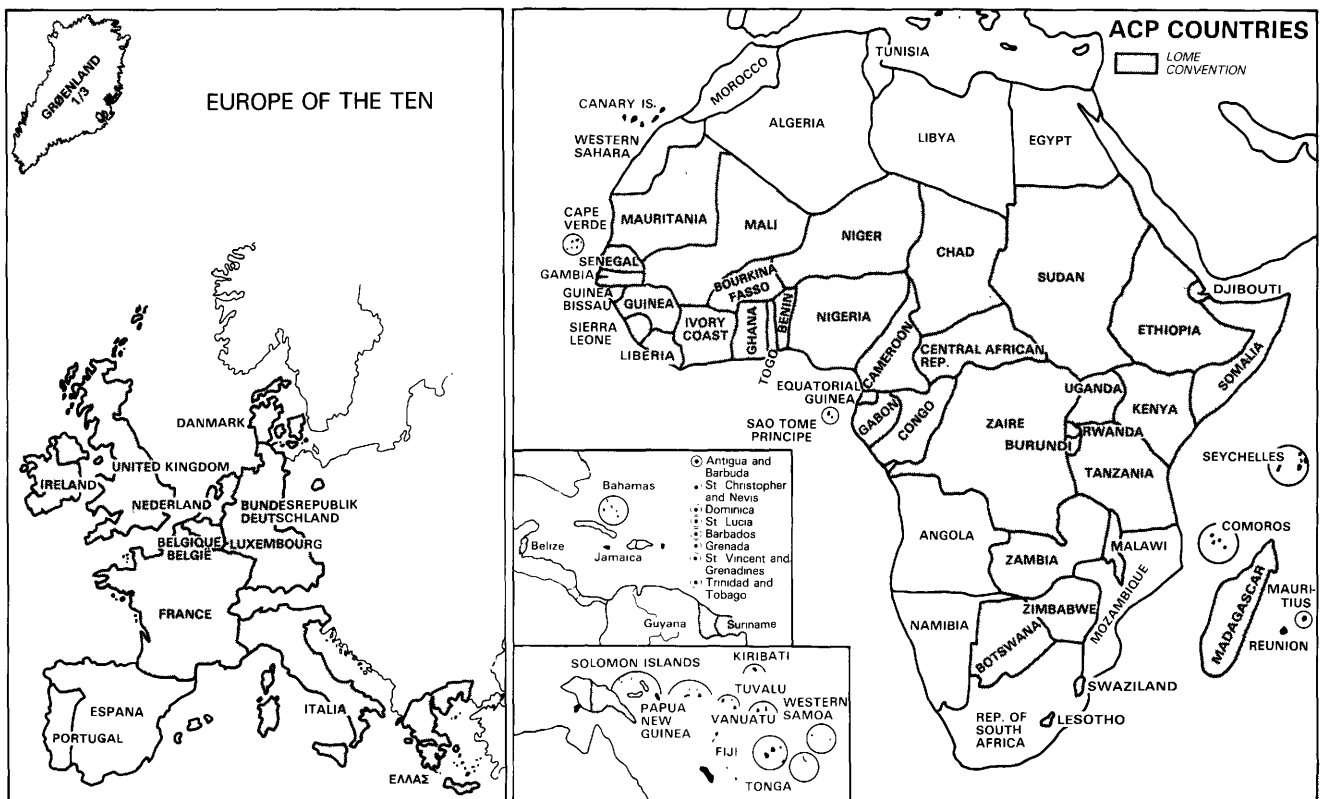
**ENVIRONMENT AND  
DEVELOPMENT**

## THE EUROPEAN COMMUNITY

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

## THE 64 ACP STATES

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



### 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  
Cayman Islands  
Falkland Islands and dependencies  
Montserrat  
Pitcairn Island  
St Helena and dependencies  
Turks and Caicos Islands

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

The *Courier* uses maps from a variety of sources. Their use does not imply recognition of any particular boundaries nor prejudice the status of any state or territory.

Cover: Above left, a tiger in an African forest (photo, Zimbabwe information); a cement factory at Rufisque, Senegal, belching smoke and dusts on the surrounding fields (photo FAO)

## ACP-EEC — Negotiations

The breakthrough—that is to say, the conclusion of negotiations for the new ACP-EEC Convention—didn't happen at the end of June at the ministerial meetings in Luxembourg. But the way ahead is much clearer and hopes are high for a favourable outcome at the next ministerial session on 9 and 10 October. **Pages 3 to 4**

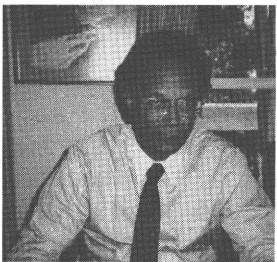


## ACP — Liberia



A country with a strong currency and an impoverished administration. A fertile countryside but an importer of rice. Foreign concessions in a state independent since 1847. These are some of Liberia's contradictions. In an interview with the *Courier*, the country's Head of State outlines the efforts being made to resolve them. **Pages 5 to 19**

## — Barbados



Deeply conscious of its traditions and firmly attached to its democratic institutions, Barbados, the most easterly Caribbean island, is a highly popular tourist destination. The other pillars of its economy are manufacturing and agriculture, the latter still dominated by sugar. Its open economy makes it vulnerable to world economic fluctuations, and Prime Minister Tom Adams makes this point in his interview for the *Courier*. **Pages 20 to 38**

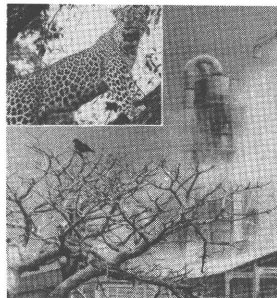
## EUROPE — Agreement at Fontainebleau

A sigh of relief from all over Europe greeted the outcome of the European Council at Fontainebleau on 25-26 June 1984. Only days before the end of the French presidency, Europe steered its way out of the impasse, and everything became possible once again. **Page 43**



## DOSSIER — Environment and development

For long a marginal aspect of development, the environment is increasingly being seen by politicians, economists and trade-unionists alike as a central factor in economic and social problems. Public interest and concern over environmental matters have led to the emergence, in several countries, of ecology party organizations, and development experts now consider the question as fundamental to good planning. **Pages 50 to 86**



## NEWS ROUND-UP — EP: inaugural session



The first session of the second European Parliament elected by universal suffrage took place in Strasbourg on 24 July. Apart from the traditional address by the oldest parliamentarian given by Mrs Thome-Patenôtre, the formal session was devoted to the election of a new President, Pierre Pflimlin. **Yellow pages**

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## Population growth: cause or effect of poverty?

Several factors are currently combining to shed special significance and a new light on the problem of the world's population. Firstly, the scale of the figures in the World Bank's World Development Report 1984, published in July, give pause for thought. The world population, which stood at 1700 million at the beginning of the century, has practically doubled since 1950, increasing from 2 500 million to almost 4 800 million; more than 70 million out of the additional 80 million persons who will inhabit the globe at the end of 1984 will live in the developing countries. By the year 2 050, i.e. in 65 years time, the world population will have reached 10 000 million, with the developing countries accounting for 8 400 million of this total: in Asia, India as the most populated country will have 1 700 million inhabitants, the same figure as the world population at the beginning of the century, and Bangladesh 450 million; in Africa, Nigeria will have 620 million inhabitants, Ethiopia 230 million, Zaire 170 million and Kenya 150 million. The trends are particularly dramatic as far as Africa is concerned and the Commission of the European Communities underlined this at the end of May in a Communication to the Council: "The population of Africa stood at 440 million in 1980. It will stand at more than 1100 million in 2010. Africa's upward demographic curve is the steepest in the world." These are sobering figures, even for those who are least inclined to ponder or look into the future.

The annual report of the United Nations Fund for Population Activities, which appeared at around the same time as the World Bank report, confirms not only the figures quoted by the Bank but also the link between economic growth and population in the Third World. Economic growth in the developing countries between 1980 and 1982 was no more than 1.9% compared with a population growth rate of 2.02%.

In 1981, moreover, it was observed that *per capita* income in the richest country was almost 220 times greater than in the poorest country, which means that the inequality gap has not only widened among the developing countries

themselves but also between the developing and industrialized countries. The signs are that this inequality gap has increased as a result of the current population growth. Those with large families are the poor and the poorly educated, people on low and uncertain incomes who have no access to proper health and family planning services; these also are the losers where rapid population growth stands in the way of development.

However, the long-term prospects are less daunting than might appear from the situation as just presented, for two reasons: firstly, because world population growth should stabilize around the year 2100, with births and deaths then drawing into balance and, secondly, because opinion has changed substantially since the first World Population Conference, held in Bucharest in 1974.

On that occasion, there was a deep divergence of views between those who regarded family planning as a priority for mankind and those who considered large families as a result rather than a cause of poverty. Parents have large families in order to help them in their daily work and to provide themselves with security in old age in countries where social security is non-existent.

Today, ten years later, it is at last recognized that rapid population growth is both a cause and an effect of poverty, that greater financial security on the part of parents is not enough to resolve the problem and that family planning, in order to succeed, requires action in other areas which play a part in the creation of a healthy environment. Awareness of these factors exists to a greater or lesser extent in Third World countries faced with more pressing problems but it is nevertheless much more acute among senior officials of ACP countries.

There remains, of course, the question of how all this is to be financed. It is, however, reassuring to note that these ideas were central to discussions at the second World Population Conference recently held in Mexico in August.

ALAIN LACROIX

## Luxembourg — Fourth ministerial negotiating meeting Into the final straight

The event that was supposed to have taken place at the Luxembourg ministerial meeting did not come about despite the marathon night session of 29 June. The event in question was the conclusion of the negotiations for the renewal of the ACP-EEC Convention, which had begun in the Kirchberg chamber ten months earlier. Some people, however, had believed that it would be possible to agree on a final package deal, which would mean that the negotiators in Brussels would merely have to tidy up the texts. For example, Mr Claude Cheysson, France's Minister of Foreign Affairs and the then President of the European Council, stated at the opening of the Conference on 28 June that the meeting should be an important, indeed decisive one — and that it was possible for it to be so. Gaston Thorn, President of the Commission, said on the same occasion: "... today and tomorrow we must concentrate on what is essential... We know perfectly well what is essential. We know that we have to renew the Convention without altering the spirit of the undertaking."

We should add, too, that optimism was in the air, since the Luxembourg meeting was being held shortly after the Fontainebleau Summit, which had enabled Europe to break the deadlock by solving the troublesome problem of

Britain's contribution to the Community budget. So, why was it not possible to conclude the negotiations this time? Was it because the discussions were more difficult for being concerned with practical subjects, as Claude Cheysson implied? Was it because, as the negotiations advanced, the debates became more serious, as Edgard Pisani explained, since the partners have realised that there is no going back on their solidarity and are wondering what they are letting themselves in for in the future?

Or was it quite simply, as Hugh Shearer maintained in his opening address, because certain texts had reached the ACP side too late for there to be any hope of their being able to give a reply to their partners in Luxembourg. It was probably for all these reasons, plus the fact that there had been very little time between the Suva and Luxembourg meetings to go into the dossiers in detail and also because both sides were experiencing internal difficulties in arriving at a common stance. We should not forget that there are *sixty-four* ACP States and *ten* Member States.

However, even if it was not possible at the fourth ACP-EEC Ministerial Negotiating Conference to resolve the issues which were at the heart of the negotiations and which were, there-

fore, the most difficult to deal with, at least they were identified during the process of sorting out the other problems. This means that things have become a lot clearer. And this was the main achievement in Luxembourg.

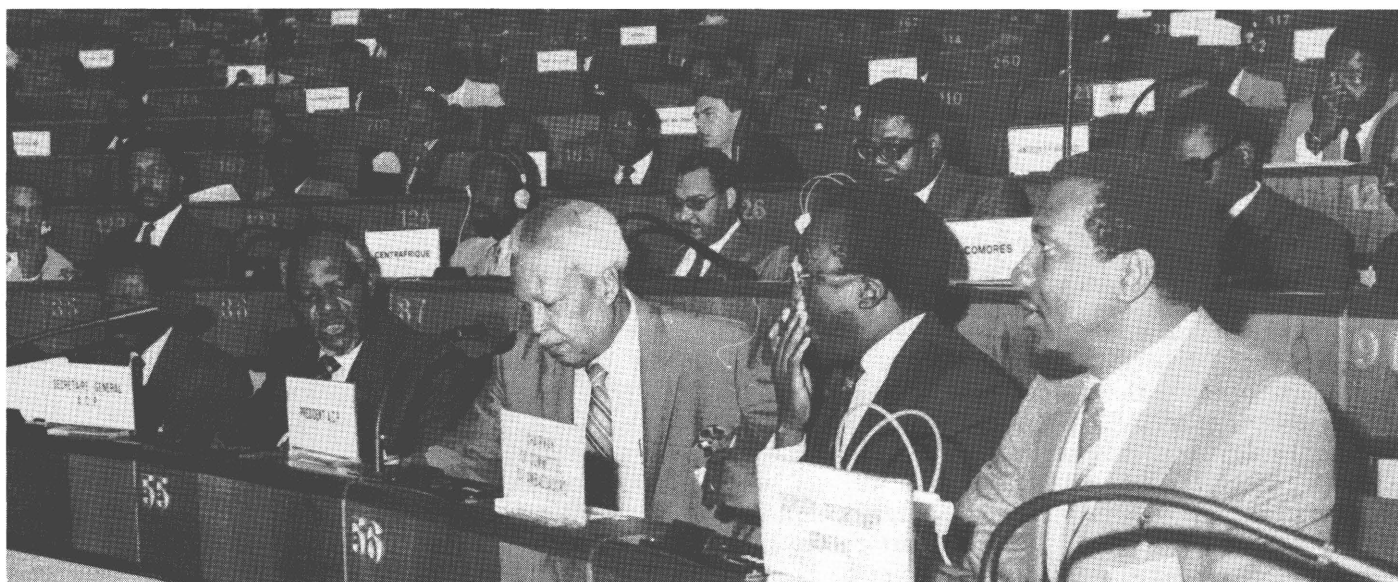
### Restricted ministerial meeting

There is now agreement on virtually all the articles in the chapter in the forthcoming Convention on institutions and on most of the financial and technical cooperation provisions. In the new area of social and cultural cooperation there is a joint text, except as regards one point concerning restitution of works of art. There is also agreement on the text of a joint declaration on ACP students and migrant workers in Europe and, with the exception of three articles, on a joint text on regional cooperation.

There is broad agreement on agriculture and a joint text has already been issued on drought and desertification. Discussions on mining and energy have been successful and those on tourism and fisheries are nearing conclusion. In addition, substantial progress has been made with industrial cooperation. This led Hugh Shearer to say that the Luxembourg meeting had "served good purpose" and Claude Cheysson to say that the negotiations were entering "the final straight."



The European Presidency: from left to right, Claude Cheysson and J. Leprette (France), Gaston Thorn, President of the Commission and Edgard Pisani



*The ACP Presidency: from left to right, T. Okelo-Odongo, ACP Secretary-General, Hugh Shearer, President of the Council of Ministers, Francis Okelo, President of the Committee of Ambassadors and E. Carrington, Deputy Secretary-General of the ACP*



*Claude Cheysson, whose mandate as President of the Council of EEC Ministers ended on 30 June, in conversation with Hugh Shearer, whose own mandate as President of the Council of ACP Ministers ended on 31 July*

All outstanding issues—so the Council has decided—will be dealt with by the Brussels negotiators (the Commission for the Community side and the Committee of Ambassadors for the ACP Group). They will have to progress as far as they can with the exercise of aligning texts. This will probably take up the whole of the month of July and, after a summer break in August, September as well. As soon as it becomes clear that no further progress can be made at this level, a restricted ministerial meeting will be called in Brussels between the ACP and EEC spokesmen. This body will be responsible for concluding the negotiations and finalizing a text for subsequent adoption *ad referendum*. Between then and the signing in Lomé—this is now official since the

vote within the ACP Group on 26 June—there will be a plenary ACP ministerial meeting to give an opinion on the text of the Convention.

#### «Lomé — a matter for people»

Among the difficult issues yet to be resolved is a series of trade problems such as access to the Community for agricultural produce, rules of origin and consultation procedures. Stabex is another hard nut to crack in the negotiations. There are differences about the products that should be covered, the dependence and fluctuation thresholds, the use of transfers and the system's financial resources.

There are still issues to be resolved in the spheres of Sysmin and European private investment in the ACP

countries. When all these matters have been settled, the question of the figure will remain — and that will be a very difficult subject. The reason why it was not possible to conclude in Luxembourg was because there had not been sufficient progress on these difficult dossiers. However, Hugh Shearer, Jamaica's Deputy Prime Minister and Minister of Foreign Affairs, insisted on pointing out that the negotiations had simply been delayed, there had been no break-off, and everyone was still sure that a solution would be found and satisfactory terms would be worked out for a new Convention, which was to be signed, once again, in Lomé. Edgard Pisani showed that he shared this certainty when he said that we were heading for "a clearer Convention, one which would by its form and its wording be more easily accessible to public opinion". He saw significant progress here "because Lomé is not a subject for experts alone. It is not even a matter for governments alone; Lomé is a matter for people, who have chosen to cooperate in their mutual interest". Mr Pisani went on to say that "there will be a future Convention; it will be another Lomé Convention not because we have been condemned to it but because we want it that way — and we want it that way because we are cooperating well and perhaps because, in our hearts, we hope that in this way we are stretching out, without ever presuming to replace it, the possible blueprint for the vital North-South Dialogue". ◊

AMADOU TRAORE

## LIBERIA

### The challenge and the response

“The Love of liberty brought us here” is the motto on Liberia’s coat of arms, and for approximately 5% of the country’s 2.1 million people this was no more than the truth. In 1847, the Republic came into existence, founded by ex-slaves and freedmen from the United States, returning to their native Africa. They brought with them the range of skills and the habits of American civilization and an affection for the land of their servitude. The country’s political, judicial and administrative life was organized, for almost 140 years, largely on the US pattern. The Constitution was modelled on that drawn up by America’s founding fathers, the flag designed after the pattern of Old Glory (a single white star in the blue field instead of the large number being the only difference). The economy was geared to the requirements of private enterprise. The currency was, in turn, the British pound and then the US dollar, and Liberia did not go to the trouble of printing its own banknotes. Somehow, the model of Liberia did not attract many more immigrants, however, and its pioneer fathers remained a minority, even after the liberation of all American slaves after the Civil War in 1865.

The love of liberty was confined to the Americo-Liberians or “Congo people” as they are called, and the majority of the population, native to that part of the West Coast, were largely excluded from political and economic life. They continued to farm in their ancestral fashion, except when they were induced, by whatever means, to work on the large estates of the Americo-Liberians who established themselves as a planter aristocracy, a fascimile of those for whom they had once toiled across the Atlantic.

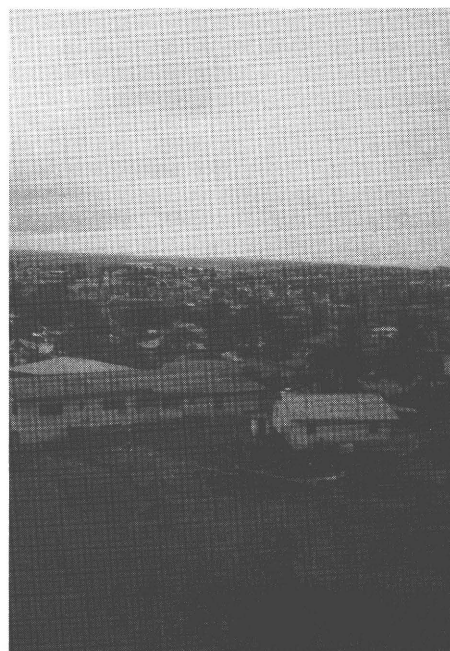
These private estates were joined, in the early part of the 20th century by rubber plantations, and in 1926 there arrived in the country the American company with the name with which Liberia was almost synonymous for forty years— Firestone. Strange to say, despite the undoubted American influence of Liberia’s ruling class, it had been the British who had had most influence in the country until the arrival of Firestone. The rubber trees were introduced by the British, the pound was the official currency until World War II, it was the British who were the first to recognize the new Republic in 1847 and who trained the Liberian Army in the early years. After 1926, however, the United States began to predominate and does to this day.

In the “Firestone period”, the foundations were laid for Liberia’s present political and economic complexion. It

is today significantly wealthier than its neighbours—an annual per capita GNP of over \$ 500 dollars—and it enjoys a special relationship with the USA which has survived the change of government—the revolution—of 1980. The USA is the largest donor of aid, has a military role in the training of the Liberian Army, maintains a powerful Voice of America transmitter in the country and is involved not only in the rubber industry, but in Liberia’s other two major export earners as well—iron ore and the maritime registration business.

It is worth stressing America’s role, because Liberia is unique among ACP countries in that it has had no direct experience of colonial rule. The country developed its own institutions which, however, had something in common with the colonial regimes that surrounded it. In both cases, a minority group, alien in origin and habits of thought, ruled the people through organs of its own devising. In colonial regimes the colonizing power withdrew during the 1950s and 1960s, but in Liberia the colonists were wholly identified with the country. Even the country’s wealth, in the form of foreign exchange, was procured from what might be termed foreign concessions (those of Firestone total a million acres) while the vast majority of the population remained subsistence farmers.

Obviously the Americo-Liberians went some way to recognizing the aspirations of the bulk of the common people, and to this day the name of William V.S. Tubman is held in honour both in the capital and the interior. But the anomaly of Americo-Liberian rule, a sort of indigenous colonialism, underpinned by the American alliance became more and more glaring as the country, in common with its neighbours, suffered the oil shocks of 1973 and 1979 and the decline of world prices for its exports of iron ore and rubber. Even the maritime registration business suffered a setback as, following the 1979 shock, it became evident that there was a world shipping surplus. The resulting depression was the stimulus to what might be called Liberia’s colonial revolution on 12 April 1980. It was preceded for some months by the formation of political parties to challenge the True Whig party (the political machine that had been in power for more than a century), by demands for participation in the process of government, by complaints about institutional corruption and the high price of rice bought in towns (as well as the low price paid to farmers). On 12 April, a group of NCOs and men of the Liberian Army, led by Master Sergeant Samuel K. Doe, toppled President Tolbert and assumed the reins of power through a People’s Redemption Council. The Council was replaced in July 1984 by a



*A view of Monrovia, Liberia's capital*



*The Executive Mansion, seat of Liberia's government*

Provisional National Assembly presided over by the Head of State.

Although accompanied at the time by regrettable bloodshed of a rather public nature, the change of government effectively ended the political and economic monopoly of the Americo-Liberians. Positions of power and influence in the country were no longer to be obtained exclusively through the True Whig Party. Chairman (now Head of State and CIC) Doe's first executive act was to double the wages of lower-paid civil servants and military personnel. In due course, the main thrust of his government's policies has become apparent. In diplomatic terms, Liberia remains firmly committed to the concept of a market economy and to the maintenance and reaffirmation of its links with the Western democracies, especially the United States. The manner in which the change of power took place caused some hesitation among neighbouring African countries, and Chairman Doe (as he then was) was persuaded to stay away from the 1980 OAU Summit. However, this rift has been healed and Liberia now plays a full part in regional and international groupings.

Domestically, the new government has striven to consolidate the "anti-colonial" aspects of the revolution of 1980. A new, more comprehensible, constitution has been drafted and it is now at a prolonged and profound discussion stage throughout the country. A return to civilian rule has been promised for early 1986 (it had originally been early 1985) and the formation of new political parties has been authorized. In economic terms, the

commitment to a liberal economy and dependence on two or three major sources of revenue leaves the government less room for manoeuvre but in certain areas the People's Redemption Council has produced guidelines for Liberianization in the transport industry, in small-scale industrial enterprises and in the use of skilled manpower, where possible, in agriculture. And, in common with most ACP countries, Liberia has committed itself to food self-sufficiency in the medium term and to food security in the long term.

### **The land and its products**

Liberia is a country of 2.1 million, with very low population density. It is divided into a humid coastal plain, on which rice—the staple food—is grown, and lush hills covered with rain forest, interspersed with farming communities that have cleared sufficient land for their own use. The major crop is rice, which is grown either on upland tracts cleared by the traditional hoe and cutlass method or in paddies provided by the abundant rainfall, and created out of swamps.

Before entering into a detailed description of the problems of Liberia's agriculture, it must be stressed that, relative to its neighbours, Liberia is a wealthy country. As already mentioned, the GNP per capita is over \$ 500 per annum, double that of most of its similarly-situated neighbours. The country's infrastructure is very well developed, tarmac roads linking the capital with three important regional centres, and with more roads being planned. There are schools in

adequate numbers, if not always quality, and the same applies to regional health centres. To this relative wealth must be added the undoubted fertility of the country. Fruit and vegetables abound, the forests are rich in "bush meat", wild buck or duiker, or wild pigs, and the soil is fertile enough to yield rice, rubber, palm oil, cocoa and coffee. 80% of the population is engaged in agriculture, and 71% is devoted to subsistence farming. Add to these two facts, the further fact that Liberia's currency is the US dollar and another element is added to the equation. The strong dollar has cushioned the country against inflation and permits the importation of cheap food (mainly rice) from South-East Asia, in addition to the rice donated under the US PL 480 Programme. The existence of the strong dollar has given a new impetus to the existence of an active international trading community—mostly Lebanese—who can import rice at a price lower than that at which farmers are prepared to grow it and can make excellent profits at the same time.

American rice and Asian rice are formidable barriers to agricultural improvement schemes. The farmers must work hard—and they do—to feed themselves, and unless the incentive is there to sell the surplus, the surplus will not necessarily be grown. Furthermore, the interface between producer and consumer is not yet as efficient as that between importer and consumer. The Minister of Agriculture, the Hon. Mr Boakai explained that problems of marketing and storage were currently greater than low farm-gate prices.

In common with most farmers in West Africa, the Liberian subsistence farmer lives on the very margin of a money economy. In contrast to the peasant farmer of India for whom the biggest single lifetime expenditure is the marriage of a daughter, the Liberian farmer must borrow considerable sums for the funeral of a parent. In the largely Christian or animist countryside, the body of the deceased must lie in state, for which specialists must be employed to inject the body with embalming fluids, a coffin and funeral attire of sumptuous elegance must be bought, and wakes are held, some lasting for weeks. The available money comes normally from the moneylender (and it can run to over \$ 1000)



who is often also the Liberian Produce Marketing Board's purchasing officer. The farmer is cut off from more direct contact with his market by the obligation to sell to authorized purchasing officer who organizes the storage and transport. For cash crops such as coffee and cocoa, the purchasing officer offers, and the farmer accepts, 40% of the Marketing Board's posted farm-gate prices, as a consequence of precious indebtedness. In addition, the purchasing officer is not trained in analysis of crop quality, or does not care about it, and efforts like that in Nimba County by the Liberian Government and the German GTZ to improve the quality of these products have been frustrated by the purchasers' refusal to pay higher prices for better quality.

All these factors have thus combined—the relative wealth of the farmer and of the land, the strength of the dollar leading to cheap food imports, the weakness of government control over purchasers, and the commitment to an open economy—to make progress in subsistence agriculture exceedingly difficult. The future is much less bleak, however, for the development of cash crops.

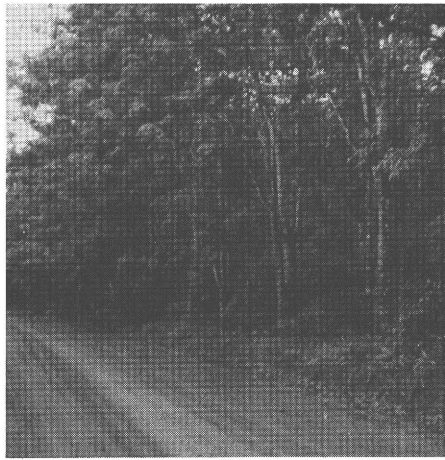
### The "Firestone State"

Another legacy of the "colonial" past, is the absolute division between subsistence and cash crop culture. There are several major rubber concessions in the country, of which the Firestone Company's is the largest, with about 12 000 people employed on the Harbel Plantation, the largest single enterprise in the country. These workers now live entirely on imported food, as do the small rubber planters who are contracted to the major estates.

Rubber, as Mr Boakai the Agriculture Minister confirmed, has a great future as well as a great past. The rubber tree in Liberia has a remarkable freedom from disease and can be tapped for about 25 years on average. The energy shortage has revived interest in natural, as opposed to butyl, rubber. The existence of rubber growing technology for over fifty years in Liberia means that a corps of Liberian growers already exists.

Rubber is currently Liberia's agricultural standard bearer. For years, the name Firestone was synonymous with that of Liberian export earnings. Since

1926, Firestone has been in Liberia, and much of the country's excellent infrastructure is due to the requirements of the rubber exporter. Firestone is by far the largest but not the only major plantation owner, the others being the Guthrie, Alan Grant and Salala Companies. Rubber plantations are labour-intensive; the trees are tapped daily and the plantation kept free of secondary growth. Smaller plantations in private hands are linked in to the larger "concessions" and supply them with the latex at an agreed price. Something like 200 000



*Rubber — one pillar of the Liberian economy*

people are dependent on the rubber plantations, the bulk of the non-subsistence farming population.

Because of its freedom from disease, Liberian rubber can be more profitably produced than Malaysian or Brazilian rubber while its geographical location makes it cheaper to ship to its principal customers. Whilst considerable investment has taken place in Liberia to introduce palm oil—especially at the EDF-supported Butaw scheme — it is quite probable that rubber will continue to be Liberia's most competitive cash crop.

One further aspect of hoped-for development: the livestock market in Liberia is dominated by growers from Guinea and Mali and the Minister of Agriculture has made it plain that one of his priorities is the creation of cattle farms to end this dependence.

### The role of iron

Not all the countryside is given over to agriculture. In recent years, the export of iron ore has provided \$250 million annually to Liberia's foreign exchange earnings, that is to say about

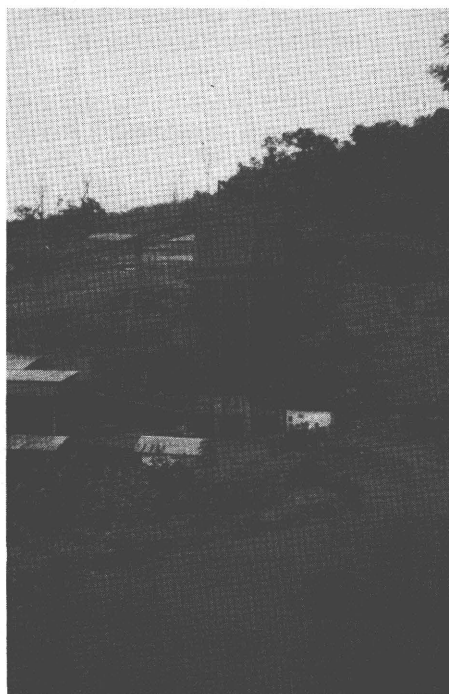
50% of the total. As with the rubber plantations, three concerns dominate the economic landscape, Lamco, Bong and NIOC. Together, they produce about 15-20 million tons of iron ore per year, which finds a ready market in Europe. Liberian iron production is not significant in world terms, where Australia and Canada are far greater producers, but the nature of the ore, and the low labour costs, as well as the proximity to Europe, make Liberian ore an attractive proposition. Since 1981, however, the European steel industry has been forced to contract, and to prune costs drastically, and the Liberian mines, which had been financially geared to sell their ore at one price were forced to accept a much lower one. The Canadian manager at the NIOC mine on the Mano River explained that his costings were made on the basis of a price of \$18.50 per ton, while the market price for NIOC's ore was currently below \$10.50. His greatest fear was that a prolonged shutdown or restructuring of the European industry would end with the adoption of new processes, which would render the ore that NIOC produces—a low-grade (57% iron) ore, high in alumina silicates, which makes an excellent binder and good slag—redundant.

This would be a great pity. Like the rubber industry, the iron ore industry is not only a contributor to the country's export earnings, but is also a builder of the country's infrastructure. The NIOC mine, the smallest of the "Big Three", employs 1500 wage earners, 350 local monthly-paid staff,



**The Minister of Agriculture,  
the Hon. Joseph Boakai**

and only 35 expatriate staff. The mine provides housing or housing grants, has its own power generator, runs two schools and a hospital, and has begun to train cadres of Liberians in advanced technical skills such as heavy equipment repair and reconditioning. This would be lost if the mine were to be closed by Central Government. The fiscal losses of the mine are around \$12 m dollars a year. The value of the services it provides cannot, under present circumstances, be quantified but the burden would fall upon the Government if the mine were to close.



*Iron ore — another pillar of Liberia's economy, currently threatened by Europe's steel crisis*

### The largest maritime power

Liberia's fame in the world rests on its flag of convenience, rather than its iron ore, however. Liberia has the largest registered shipping tonnage in the world, about 60 million tons, and registration brings in about \$22-23 million each year. The creation of the flag of convenience in 1948 was supported, if not masterminded, by the USA and the papers of Edward Stettinius, former US Secretary of State, show that he was of the opinion a friendly state operating a flag of convenience would be of some help to America's intelligence services. The Liberian company which administers the flag is the International Trust Company which is 80% owned by an American Bank. This is not, however, to say that Liberia does

not treat its flag with seriousness. Philip Bowen, Liberia's Commissioner for Maritime Affairs stated that "No flag state can run away from its responsibilities" and went on to explain that the Bureau of Maritime Affairs maintained a Head Office (in the USA) and six regional offices, as well as 200 nautical inspectors. The outgoings for all this were in the region of \$4-5 million. Mr Bowen explained why the Liberian flag was popular, and the explanation had nothing to do with lower standards, or lower fees. "Panama, the second most popular flag of convenience", he said, "has lower fees. But we feel we can charge what we do, because of the service we offer." Essentially, the Liberian flag is popular because it permits ships' owners or masters to choose crews according to their nationality (and hence wage-rates) rather than be forced to accede to the minimum wages imposed by unions in industrialized countries. Liberia's posted controls on wage rates stipulate instead the ILO minimum. This has led to an expansion of the pools of trained seamen from Korea, India and the Philippines who readily accept wages lower than those demanded by Seamen's Unions in Europe, the USA or Japan.

Over half the ships sailing under the Liberian flag are US-owned, followed by Hong Kong, Japan and Greece. Philip Bowen is proud of the Bureau's record — all vessels must be inspected annually and those over 15 years old must be inspected twice a year. In-

spectations cover loading levels, structural and mechanical soundness, navigation and safety equipment and crew conditions. "We have a good record. Last year Liberia had no major accidents on ships flying the Liberian flag, and bankers and insurance companies now recommend shipowner clients to register with us." Two minor irritants were not forgotten by Mr Bowen: Liberia's resumption of diplomatic relations with the State of Israel has cost it some oil-tanker business. And Liberia, he admits, was slow to establish a training school for ratings and officers. Whilst a maritime training school for ratings has now been set up under the aegis of the Mano River Union, Mr Bowen recognizes that several Far Eastern countries were faster off the mark than Liberia, and regrets this.

Obviously, with revenue from shipping at only 10% of earnings from iron ore, the flag is not so crucial to the Liberian economy as it once was. But it is a welcome contribution to the government's revenues, and one in which Liberia has consistently striven to improve its service.

### Challenge and response

It has already been said that subsistence agriculture has suffered from an inadequate response to an ill-perceived challenge. The farmer will only produce more or better when the price is right, and the importer can make a bigger profit on food when the price is low. The problems of challenge and



*The countryside abounds with food of all varieties*



**The Minister of Education,  
the Hon. George Boley**

response are those which face other areas of Liberian life and where the recent past has been marked by a growing number of successes.

Liberia has a problem in the field of education. The country has a long history of primary and secondary education: each village has its elementary school, sometimes a second one catering to the Muslims. But there the matter has been content to stay. The privileged, that is to say, those wealthy enough to be able to pay for further education, and those close to the capital, were within reach of further education. Everybody else was not so fortunate. The possibility of access to higher education was limited by physical access to the opportunities and by the quality of primary education. Since the change of government of 1980, education has become a priority again — the challenge of self-development has met with a firm response.

The Minister of Education, Dr George Boley, is a former senior administrator from the Ministry. "Getting the Minister's job here", he said, "was like coming home". It was an auspicious choice. Dr Boley explained that his programme has three main thrusts. They all concern quality, because one of the principal challenges facing the country is qualitative: it is not a question of doing more, most of the time, it is a question of doing it better. The first priority, as far as Dr Boley is concerned, is to improve teacher training and the supervisory

system. At present, only 30% of teachers can be processed by the existing facilities. There are two colleges offering a four-year degrees courses and two Teacher Training Institutes offering two-year certificate programmes. The annual output of teachers is in the region of 250 at the primary level, 50 at the lower secondary level and 30 at the upper secondary level. It is Dr Boley's aim to upgrade the throughput of teachers, and he plans to do so by training more teacher-trainers. Reinforced staff in these existing institutions will be able to train more teachers who will thus upgrade the quality of education.

taught. It is a truism in Liberia that while the stores are full of spare parts for various mechanical imports, the only mechanics are the Guinean immigrants, who come equipped with skills from a land empty of spare parts. Dr Boley has therefore laid stress on the teaching of science and mathematics at secondary level, so that the industry which the Government hopes to encourage will be served by adequately trained manpower. Five regional Science Centres are planned (one of which will be equipped and built with EDF funding) to produce the necessary skills both for immediate practical application and to



*Compared to those in the rest of the region, Liberia's roads are of high quality*

But in tackling the problem of quality, one must know what one is aiming at. Dr Boley is quite specific.

More teachers and teachers of a higher calibre are required to ensure that access to education is spread evenly across the country. Dr Boley has masterminded the establishment of regional centres, attached to schools, where problems concerning materials, staff, and curriculum can be dealt with, where there are facilities for the storage of materials and teaching aids, parent-teacher meetings and inter-faculty meetings. This decentralization will help to reduce administrative bottlenecks and boost the education supervisors' powers of initiative and decision.

Qualitative changes are also needed in the educational field to ensure that the most necessary subjects are being

ensure a high standard among those seeking first degree courses.

Qualitative changes must also be mentioned in the civil service. The challenge here is even more obvious than in the field of education — the civil service was, until the change of government in 1980, underpaid and unproductive. The new government doubled civil service pay, but required from it a higher standard and output. The Director of the Civil Service Agency, Mrs Linnie Kesselly, was given ministerial rank, made responsible to the Executive Mansion, and given carte blanche to increase the quality, dedication, self-confidence and effectiveness of the civil service. The task has not made the Agency popular, especially with ministers who hitherto regarded their civil servants as clients and not advisers or executives. In addition, several generations' worth of

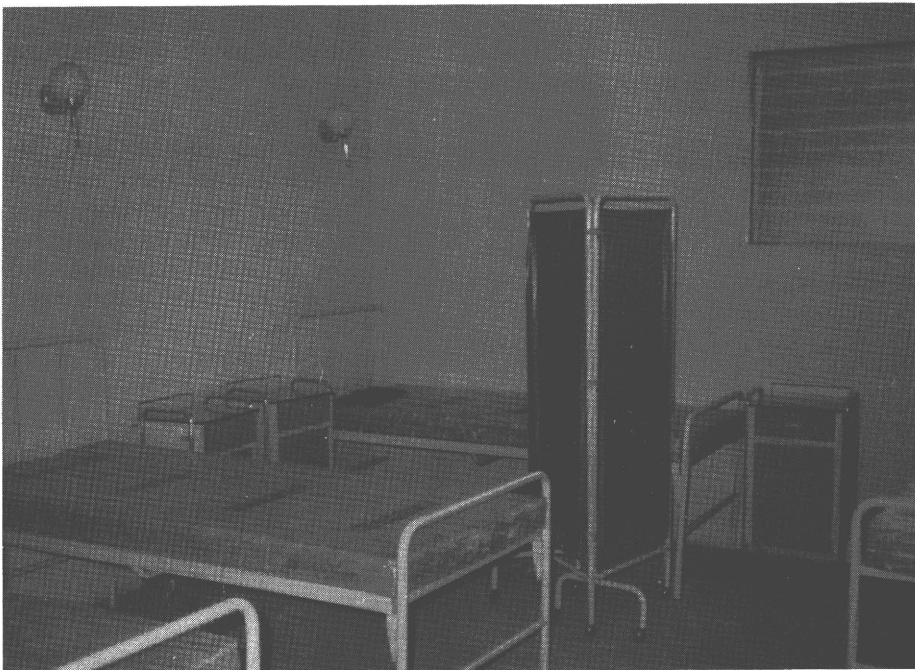


*A typical microproject: a covered market by the road near Kakata*

negative attitudes have to be fought—civil servants were never highly regarded, nor well-rewarded. But the struggle to create an objective and independent service has been worthwhile: more and more ministers are obliged to take note of their civil servants' opinions, and a group of highly-motivated administrators throughout the service is spreading the message. A perceptible shift in attitude has taken place—it is the response that the challenge has brought out and, as with education, the response favours quality over quantity.

In these two areas, education and

administration, the push for qualitative improvements is on. The Government of Liberia has realised that industrial development and Liberianization cannot progress without trained Liberians, and that central planning cannot be effective without a motivated civil service. There is a third area in which the interplay of challenge and response must be noted as well—that of the microprojects. Microprojects are popular everywhere—with donors, because there are few technical problems; with the local community because they respond to a genuine need; with the government



*Rural clinic at Bahn — the government lacks the resources to open it to patients*

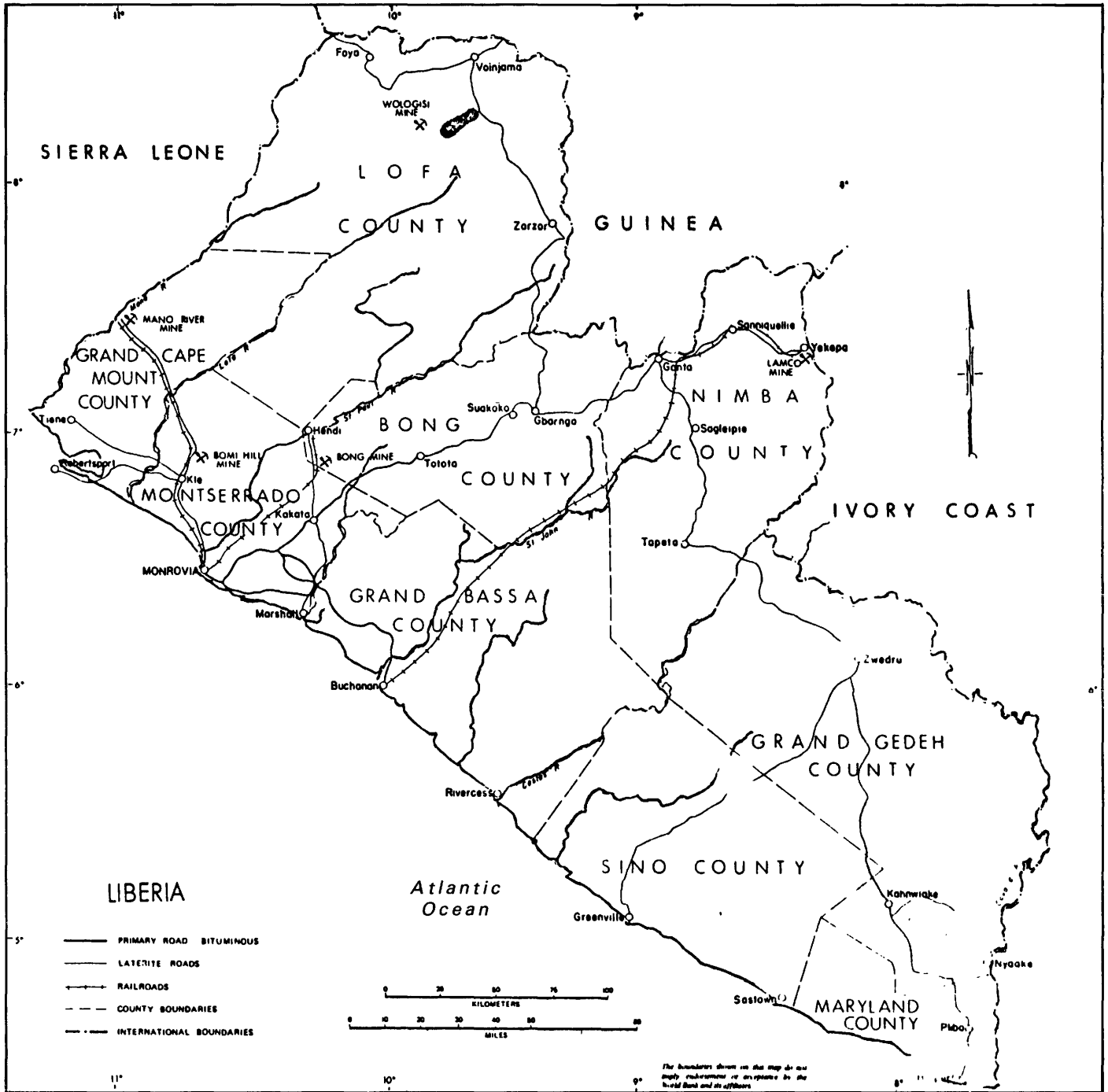
because they do not tie up too high a proportion of development aid. The government of Liberia has gone a step further than many and has started to create a national framework for micro-projects.

Aaron Paye is an Assistant Minister in the Ministry of Planning and Economic Affairs, in charge of rural regional planning, and chairman of the Microproject Programme Steering Committee. He explained that in the past, local communities were left out of the planning system, despite the fact that they were the best judges of what was required in terms of projects. Mr Paye's task is to create a framework for the coordination of micro-project requests, to design systems for avoiding duplication, to establish means of ranking requests in order of priority and to ensure that self-help can be matched by central government in meeting running costs. The task is an uphill one—central government resources are limited and government departments still tend to act in ignorance of each others' intentions. But in 1983, Mr Paye's department issued a Procedural Manual on Self-Help which has had considerable effect, and Mr Paye tries to involve all sorts of agencies to eke out the resources of the central government—Peace Corps volunteers, mining companies, aid agencies involved in nearby projects, the Armed Forces. "Dollar for dollar" he explained, micro-projects, "are the most effective means of investing in development". The World Food Programme, for example, is being phased out in favour of a school farm programme based on self-help.

The challenges to Liberia's future development are many: the central government is short of funds and has added to an inherited debt by lack of managerial experience and expertise; there is too little stimulus to the farming population to produce more food and to the importers to stop importing it; the keystone industries are in decline and in debt. But in a number of areas, the challenges are being met by a response which puts quality before quantity, which stresses objectivity, professionalism and independence of thought. Liberia is emerging slowly from its own form of internal colonization, and the responses can only help to make its emergence more assured and more permanent. o

TOM GLASER

LIBERIA AT A GLANCE



**Area:** 43 000 sq. miles — 111 000 km<sup>2</sup>

**Population:** 2.1 million (1982)

Projected growth rate: 3.7%

Density: 16.3 per km<sup>2</sup>

Urban population: 26%

**Capital:** Monrovia (400 000 inhabitants)

**Currency:** Liberian dollar, at par with US \$

**Economic outline**

(all figures given are for 1981 unless otherwise indicated)

**GNP:** \$ 1 010 million — \$ 521 per capita

**External Trade:** Imports \$ 477 million (30% EEC)

Exports \$ 524 million (64% EEC)

**Balance of Payments:** — \$ 88 million (1982)

— \$ 65 million (1981)

**External Debt:** \$ 800 million (1982)

**Exports:** Iron ore — 63.2%

Rubber — 17%

Timber — 7%

Diamonds — 4.5%

Coffee — 3.7%

Cocoa — 1.8% (1980)

## Interview with CIC Dr Samuel K. Doe, Head of State, Republic of Liberia

► *What were your hopes for your country when you came to office in April 1980, and what progress has been made in attaining those objectives?*

— When the PRC took over the reins of government, we promised to reconstruct the national economy, reconcile differences that have split the nation into two main blocks, and build a new Liberian society on equality and justice. However, looking back at the past four years against the backdrop of mounting problems, national and international, the PRC has made significant strides in its goals. I must emphasize that education, communication, transportation and health and social welfare needs have been our major concerns.

Today, there are many Vocational/Technical Training Centres throughout the nation, developing and creating productive individuals who contribute meaningfully to national reconstruction and the manpower of Liberia.

In the area of communication, we launched a rural communication scheme, aimed at establishing radio, television and newspaper networks, in rural communities.

More health centres have been constructed in both urban and rural areas. A new Japanese-financed \$ 6.5 m 500-bed maternity centre is nearing completion, while a 120-bed hospital is now operating in New Kru Town.

All of these programmes are geared towards rendering more effective and efficient services to Liberians and to foreign residents.

► *Liberia's traditional free market economy has been maintained, but the change in power had some effect on confidence of business circles and led to a certain amount of disinvestment. What is being done to restore a healthy investment climate?*

— It is true that the transfer of power in Liberia in 1980 did have some effect on business confidence, but I don't think there was anything unusual about that. Businessmen, as



The Head of State  
Dr Samuel K. Doe

you know, are normally sensitive to political changes, particularly those that lead to a complete transfer of power, because they are unsure about the new directions to be taken or the new policies to be adopted by the new government. For our part, it became quite clear from the very beginning of our Revolution that we had no intention of changing the economic philosophy of the country and were determined to maintain the free and open environment that had characterized our economy for so long.

Following the Revolution, there were some who felt that we should change to socialism. But the PRC had no such intention and we did our utmost to reassure businessmen and investors of our commitment to the free enterprise system. Acts of vandalism against businesses and molestations of businessmen were promptly punished and an atmosphere of calm and tranquility was restored within the first few months.

For us these were necessary steps to take, but even as we took them, we knew that they were in themselves not enough to restore confidence in the economy.

We therefore adopted policies and measures designed to reassure the private sector of our commitment to free enterprise and to guarantee the safety and security of private properties and individual rights.

We think this has had some positive results because there has been a significant upsurge in business activity in the country over the past three to four years. In addition, we are making certain adaptations to our investment incentives code to make it more attractive to foreign investors. Already, we are noticing a net inflow of private capital which we think is a clear indication of the return of confidence in the economy.

► *Liberia is a member of two regional organizations — ECOWAS and MRU. Your relations with Sierra Leone and Guinea, your partners in the MRU, have considerably improved in the past year. Does this mean that regional cooperation will be given higher priority in the future?*

— Indeed, there can be no question about that. We promote regional cooperation not as political fad but in recognition of its important role as an instrument for enhancing our capacity to achieve some of the economic goals and objectives that operating in isolation makes difficult.

Our partners also promote regional cooperation for the same reason, and so we all have a common commitment to improving the welfare of our respective peoples through cooperation with one another rather than by strictly individual efforts. Liberia has always worked towards this and the PRC Government has never faltered in pursuing this line. In the past eight months I have had the privilege of inviting my colleagues from Sierra Leone and Guinea twice to Monrovia, and I have tried as much as possible to attend all economic summits in the sub-region and in the ECOWAS regions. You can see then that our commitment is unequivocal and total.

► *Internationally, 1983 was dominated by the re-establishment of diplo-*

*matic relations with Israel. Is this likely to create tensions within the OAU?*

— Before addressing your question, I believe it would be useful to review Liberia's policy on the Middle East. Liberia's decision to re-establish diplomatic ties with Israel on August 18 1983 was taken because of our strong belief that the continued estrangement and isolation of Israel undermine the prospects for a peaceful solution of the Middle East problem.

It is recalled that African countries decided to sever diplomatic ties with Israel in solidarity with Egypt for the occupation of its territory by Israel by force of arms. This situation no longer exists since Egypt's territory has been restored and both countries have resumed diplomatic relations.

Although Liberia has renewed ties with Israel, it remains committed to the Arab cause. Liberia firmly believes that there can be no just and lasting peace in the Middle East if the following conditions are not met: (a) due recognition of the inalienable rights of the Palestinian people, including their right to a homeland of their own; (b) Israel must withdraw from all occupied Arab lands; (c) that all states in the Middle East, including Israel, have a right to live freely within secured and internationally recognized boundaries.

Turning to your question, the re-establishment of ties with Israel is not likely to create tensions within the OAU for a number of reasons. First, many African countries are reported to have very close economic ties with Israel although they have not formalized their relationship. Second, Egypt, in whose cause African states severed relations with Israel, has re-established ties with Israel. Third, most African countries believe in the principle of non interference in the internal affairs of other states.

Finally, most OAU Member States recognize that it is the sovereign right of any state to make a decision concerning its relationship with another State.

► *A new constitution has now been drafted and endorsed by you. How do you see the timing for the return to civilian government?*

— As you have correctly noted, we have endorsed the New Constitution. This exercise not only attests to the sincerity and honesty of our Govern-

ment, but also demonstrates our commitment to shape a new destiny for Liberia, one which will contain the basic elements of democracy, justice and equality.

► *What do you think are the major achievements of the EEC-Liberia Co-operation to date?*

— It is rather difficult to speak about achievements in EEC-Liberia relations in specific terms because here, as in most other ACP countries, the rate of implementation of the indicative programme has not been up to expectations and the record has been mixed. We could, of course, list the number of projects that have been undertaken both under Lomé I and Lomé II and indicate which ones have been completed and which ones are still being implemented, but I think it is better to consider the issue of achievement from a wider angle. But in doing this, one cannot help but come face to face with the institutional bottlenecks which have attended the process of programming EDF funds made available to the ACP countries and then disbursing them to the various projects. We think much improvement is needed in the system, and it is our fervent hope that the current discussions of a successor convention will bring about this improvement.

► *The negotiations for the renewal of Lomé II are now in full swing. What improvements or innovations would you like to see in the successor convention, both for Liberia and the ACP group as a whole?*

— As you know these negotiations are conducted on a bloc basis, and so the viewpoints, desires and wishes of Liberia are articulated through the President of the ACP Ministerial Council as are the viewpoints and desires and wishes of other ACP states. The experience of Liberia is, by and large, the common experience of the ACP group, particularly in the area of financial and technical cooperation, and we feel that much progress could be made in EEC-ACP cooperation if some headway were to be made in the current discussion on this.

Despite the above-mentioned approach, given the thrust on agriculture and integrated rural development and increased productivity in food production, as contained in her Second Four Year National Social-Economic De-

velopment Plan, Liberia would like the next Convention to make provisions for financial and technical assistance, technological transfer, equipment and supplies to enable us achieve our objectives in this sector.

We are particularly pleased to note that, unlike Lomé II, the current negotiations include a provision on investment and this could increase investment possibilities from the EEC to the ACP States as well as open up avenues for joint venture arrangements.

Finally, regarding the disbursement of EDF resources, Liberia's view is that the bureaucratic red tape and cumbersome administrative procedures placed on the ACP States for the use of those resources were largely responsible for the slow pace of project implementation and utilization of resources under the second Convention. It is our hope therefore that some flexibility will be built into the next Convention to help accelerate disbursements once projects are approved.

► *Liberia is best known worldwide for its flag of convenience. What contribution does this activity make to the national income and how is it organized?*

— Rather than agreeing with the statement "Liberia is best known worldwide for its flag of convenience" it is more professional to say, Liberia is best known worldwide as the world's largest maritime power in total registered merchant tonnage of flag of open registry.

As regards to its contribution to national income, over the years, the nation has benefited immensely from the Maritime Programme. Maritime revenues have consistently accounted for 10-12% in as far back as 1980 and at present (1984), 15-16% of the gross national revenue, as there has been a steady increase due to increase in annual tonnage tax.

In addition to generating revenue, one of the primary objectives of the programme is safety of life at sea and, in order to accomplish this, it has established well organized and effective inspectorate systems on a worldwide basis to inspect vessels calling at each principal port once a year to ensure that they measure up to standards of the International Maritime Organization (IMO) and recognized ships' monitoring classification societies. ○

Interview by T.G.

## Mano River Union

### One step across frontiers

On 3 October 1973, Liberia and Sierra Leone founded the Mano River Union. It was an inauspicious time for imaginative leaps, for in that month the Middle East war delivered the first of the oil shocks that really spelled the end of the 'Golden Sixties'. It was inauspicious, too, in that, all over the world, regional groupings were coming under strain — federations set up by departing colonial powers crumbled in the Caribbean, Africa and Asia, liberation wars shook the developing world, and few political initiatives based on imagination were considered possible. It was therefore an imaginative leap for two small, relatively poor neighbours in West Africa to sign a treaty which had, as its objectives, cooperation and harmonization.

The two countries have, together, a population of just over 5 million, a low per capita GNP (Liberia's was \$540 in 1980 and Sierra Leone's \$270) and an infrastructure threatened by foreign currency shortages and neglect. There were no compelling strategic reasons for the union — Liberia and Sierra Leone had enjoyed good relations since the latter's independence. But there was a recognition in both countries that industrial development would be hampered by the size of the home market, that cross-border trade should be liberalized and, to the benefit of both governments, 'brought in from the cold' and that common standards, programmes, research and training should be sought. In favour of the idea of Union was the fact that both countries shared an English-speaking background (Liberia as an independent country since 1847 and Sierra Leone as a British Colony since 1808).

The principal objectives of the Mano River Union were set down as being the creation of a customs union and the stimulation of industry to serve both countries. Flowing from

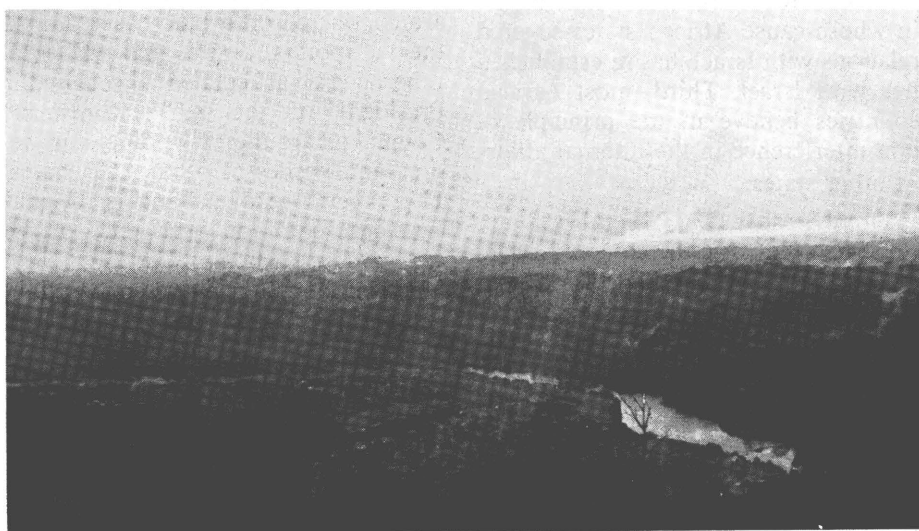
these two major objectives come the subsidiary objectives, development of communications, energy resources and training, the establishment of common standards and of regional data banks. The whole range of objectives is practical, the scope realistic. The Secretary-General of the MRU, Dr Augustus Caine, formerly Liberian Education Minister, underlined this when he said: "Our immediate goals are strictly practical and we are pursuing economic and not political unity. If these efforts prove successful, we could transpose them to a wider canvas like ECOWAS. We think that in our region and sub-region the work we are doing is realistic". The Mano River Union is chairman of West African intergovernmental bodies, and, as Dr Caine pointed out, could serve as a test-bed for various integrative ideas. The Union is itself open, in principle, to all West African States, but hitherto only the neighbouring Republic of Guinea has joined. It did so in 1980, more for political and geographical reasons, however, than economic ones.

#### Institutions — ways and means

The Council of Ministers of the Union (the decision-making body) is serviced by a Secretariat which proposes areas of action and provides the

administrative and technical follow-up to any actions undertaken. The Secretariat, which has its headquarters in Freetown in Sierra Leone, has a staff of over 300 and a budget (for 1983/84) of \$US 4.5 million. Half of this sum pays for the Secretariat, and half is spent on the Union's various training centres, for forestry, telecommunications and marine engineering. The money comes from the various member governments of the Union and from a variety of external donors, including the EDF which provided ECU 5 m under Lomé I and is committed to a similar sum under Lomé II.

In any international organization, the quality of the staff and the nature of their thinking helps to determine the organization's success, but ultimately the vital factor is the commitment of the members states' governments. This commitment remains firm in the two founding states although it is difficult to gauge the attitude of the new government installed in Conakry. This positive attitude is all the more remarkable because of the inherent problem of imbalance where a customs union is proposed between a hard-currency (Liberia) and two soft-currency countries. A further imbalance may be significantly reduced in future, that of economic philosophy. Both Sierra Leone and Liberia are free-market, private enterprise oriented, whilst the Guinean economy was much more state-controlled. Since the change of government, Dr Caine is confident of a move away from state control in Guinea.



*The Mano River, the frontier between the founding states which gives its name to the Union*



## Practical achievements

In May 1981, a sufficient degree of harmonization of external tariffs had been achieved to liberalize internal trade between Liberia and Sierra Leone, and Guinea removed its trade barriers in May 1984. The practical effects of this move are hard to estimate, but, more important than the immediate effects are the possibilities of stimulating future industrial growth or development.

Hitherto, all the Union countries have been held back by the same combination of factors: small home markets, lack of foreign exchange, poor infrastructure and an untrained labour force. The existence of the Union will not in itself bring about a dramatic change. But it does do a lot to create the preconditions for change.

Firstly, since 1980, the Union's Industrial Promotion Unit, manned by well-trained professionals, has produced a detailed industrial survey, established a documentation system and price development records, produced an MRU investors' guide and has itself conducted a number of pre-feasibility studies into certain industrial areas. These are areas which require minimum imported raw materials or technology, and include tomato and fruit processing, cassava processing, glass container manufacturing, salt/soda production, charcoal-making



*A high priority is given to improving the road network*

and woodworking industries. Not only is there a degree of professionalism in these studies which surpasses the work done in some of the national ministries, but the work is done against a more neutral technocratic background and the studies are fully objective.

Secondly, the Union has set out to tackle the problem of training. Three major areas of training, already mentioned, have been selected. Sierra Leone is host to the Telecommunications and Postal Training Institute, while Liberia houses the Forestry Training Institute and the Marine Training Institute.

The problem of foreign exchange shows itself especially acute in matters concerning energy. Sierra Leone and Liberia are both dependent on imported energy for their industry and one of the first major areas of study for the Union has been the Mano River Basin Scheme. This scheme would provide hydro-electric power for both countries and would be cheaper than the projected national schemes. The EDF financed the feasibility study to the level of ECU 2.6 m, and the national governments are at the moment pondering the scheme and, presumably, nerving themselves to cut or reduce the national power schemes.

Having dealt with training, investment incentives and energy, the field of communications remains. Sea transport between the Member States is expensive and road transport is difficult because of the poor condition of road links. The first concrete—and the pun is unintentional—act of the Mano River Union was the promoting of a bridge across the Mano River between Zimmi (Sierra Leone) and Kle (Liber-

ia) which will form part of a Freetown-Monrovia highway. This will be the most visible part of the Union, a boost to trade and an upgrading of the infrastructure.

## The way ahead

An observer might query the utility of the Mano River Union and point out that after more than a decade, the only visible progress for the average citizen is a bridge which at the moment, links nowhere with nowhere. But this would be far from the truth. Two, and now three countries have harmonized their external tariffs, and projects are on hand for common quality standards and common areas of research. Industrial development studies and statistics have been drawn up, improvements in infrastructure, energy supply and communication have been proposed, and training institutes set up. Wholly locally produced and partly (up to 35%) locally produced items enjoy tax privileges and a common industrial strategy is being run by professionals on strictly pragmatic lines.

When one considers the handicaps under which the Union operates, its dependence on member states' governments for funds, the scarcity of financial resources and the pressure of national, regional and tribal loyalties, the observer will have to reconsider his verdict. That it has not done more can be excused, explained and amended. That it exists at all, and exists as it does at a level of practical achievement and orientation, is a matter for general congratulation. ◦

T.G.



*A group of trainees from the Forestry Institute learning the techniques of land surveying*

## EEC-Liberia Cooperation<sup>(1)</sup>

When Liberia signed the first Lomé Convention in February 1975 it was not a newcomer to Europe, as one may see by looking at its history. In fact, European member states, almost 130 years ago, had concluded navigation and trade agreements with Liberia and trade with Europe is one of the dominant features of Liberia's economy today. Shortly after the office of the National Authorizing Officer was established in the Ministry of Finance and the Delegation was opened (April 1976), an allocation of ECU 25 m was made under the Lomé I Indicative Programme. Most of the funds were given as a grant and ECU 4.8 m were allocated under soft loan terms. Besides the Indicative Programme the EEC assistance to the mining sector was of strategic importance for Liberia's iron ore development. In the 1970s the use of pellets became increasingly popular and ECSC assisted the Bong Mine Company in 1977 with an ECU 28 m loan for the erection of a second pellet plant. In 1979 Liberia received a STABEX transfer payment of ECU 7.6 m for the loss of earnings from the export of iron ore. Liberia benefited further from EEC assistance to regional projects—mainly WARDA and MRU—as well as from subsidies given to the EIB projects in energy and development finance.

After the new Government, which took over in April 1980, had settled in, a programming mission visited Liberia in February 1981 to prepare the terms of the Lomé II Indicative Programme. ECU 29 m were ear-marked for Lomé II and in 1983 the figure was revised upwards to ECU 31 m. This includes an increase in the grant element to ECU 26.3 m leaving a balance of ECU 4.7 m under soft loan terms. In addition to the Indicative Programme, EDF assistance to regional projects and EIB continued under Lomé II.

Recent developments in Liberia have prepared the ground for a new and more intensive level of cooperation with the EDF. The decline of the economy, mainly influenced by a fall

in export revenues of iron ore, has contributed to the erosion of public finance. The downturn of fiscal revenues left the Government with diminishing domestic resources for development and the donor conference, held in 1983 in Switzerland, did not produce a substantial short-term increase of foreign assistance. It is against this background that the awareness of the EDF assistance which has proved to be a reliable partner since 1975 has grown and Lomé II programming reached a new stage.

### Agricultural and rural development

In the Indicative Programmes of Lomé I and II, sectoral priority was given to agricultural and rural development. To cope with the need of the economy for diversification and to create export income, the EDF projects concentrated on cash crop development such as palm oil, coffee and cocoa.

With the clearing of 7 500 acres of land 50 km north of Greenville the Government has prepared the ground for EDF investments of ECU 10 m under Lomé I into the Butaw Oil Palm Plantation. A favourable climate, good soil and short distance to the port of Greenville have largely contributed to the site selection of the plantation. The economic activities of the farming population in the area were mainly limited to subsistence level agriculture and studies done by SODEPALM

(Ivory Coast) and IRHO showed favourable conditions for the project.

In 1977 the Liberian Palm Products Corporation (LPPC), one of Liberia's parastatal organizations, took over the management of the plantation, assisted by technical assistance from SODEPALM. The expatriate management was withdrawn during the coup d'état in 1980 and LPPC was left with several difficulties. The delay in the land clearing programme has led to a surplus of plants in the nursery which were too mature for transplantation. The training of the LPPC management was not sufficient due to the early withdrawal of SODEPALM, and the shortage of budgetary assistance from the Government as a consequence of the deteriorating economic condition of the country had brought the operation of LPPC to a halt in early 1982. At that time 5700 acres of estate and 600 acres of smallholdings had been planted. The road programme with the exception of 30 km of tracks, labour housing, central office and workshop facilities including water and electricity supply, have been completed.

In June 1982 two 1.5 t/h pilot oil mills financed by EIB loan were commissioned to enable the plantation to process at least a part of the oil which was ready for harvest and to ease the pressure on the operating cost. In October 1982 the Butaw Oil Palm Corporation (BOPC) was established as a separate corporation under the Ministry of Agriculture and a management team consisting of an estate manager, a financial comptroller and a mechanic was made responsible for the operation of the plantation. Due to



*Phebe Hospital where the EDF contributed to the building of an extension*

(1) Article supplied by the EEC Delegation, Liberia.

the small capacity of the mills and the lack of export facilities, the oil production is sold on the local market.

An industrial mill will be installed and in production by the end of this year.

ECU 2.2 m will have been spent by December 1984 to keep the plantation operating since 1982 and a proposal to spend a final ECU 5.3 m mainly for a continuation of management, agricultural inputs and an export terminal in Greenville is under preparation.

An attempt to assist coffee and cocoa production was made under the Lomé I Indicative Programme and ECU 2.9 m was allocated for a three year development of 2 460 acres of coffee and 3 310 acres of cocoa in about 900 farmholdings in two counties. The Government made its own effort to contribute to the project by setting up the Liberian Coffee and Cocoa Development Corporation (LCCC) but the planting targets could not be achieved, mainly due to the lack of farmers' motivation and labour constraints at the farming level.

An evaluation of the constraints in coffee and cocoa development showed that the subsistence farmer is obviously not sufficiently prepared to adopt cash crop production. The dependence on upland rice as the main staple food, which is a labour intensive and relatively inefficient means of producing rice, does not leave sufficient time for planting, harvesting and processing of coffee and cocoa. With the introduction of a swamp rice component into the coffee and cocoa scheme it is intended to increase the productivity of the farmer. This will enable him to spend less time on food production for



*The mining sector needs external support as long as the world recession continues*

himself and more time on cash crop development. Grand Gedeh County has been selected for the new approach and in October 1984 a technical assistance team will for a period of two years train the local staff of LCCC and farmers in the areas of soil surveying, coffee and cocoa rehabilitation, swamp rice and cooperative development.

### Infrastructure

The rehabilitation of Harper Port is the major contribution of the EDF to Liberia's infrastructure and has received increasing attention in the Indicative Programmes. Under Lomé I, a study of the southeast port development has been financed (ECU 0.8 m) and under Lomé II funds for implementation (ECU 8.0 m) are programmed.

The southeast of Liberia is the least developed part of the country although rich in agricultural and timber resources. One of the major reasons for its low level of development is the poor quality of access roads and the

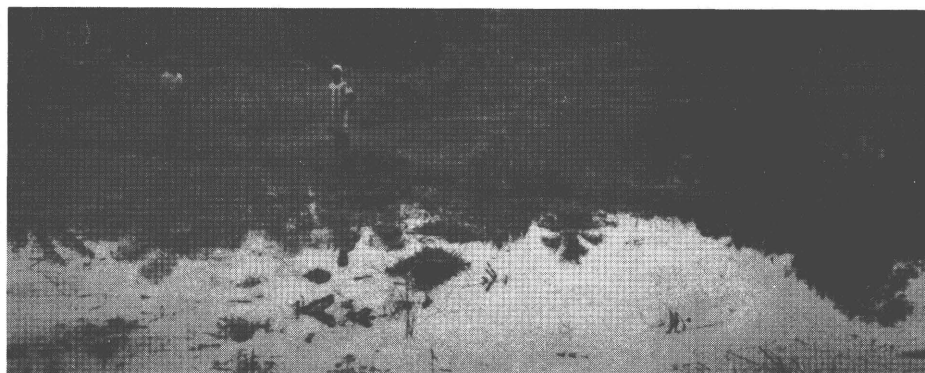
insufficient facilities of the port of Harper as the major gate for imports and exports. The existing port facilities are located around a jetty on which 2 000-4 000 ton coastal vessels are now berthed under completely unsafe conditions. Import traffic categorized as general cargo is expected to rise from 10 000 to 60 000 t in the coming 15 years, doubling the ship calls. The export traffic, mainly logs and timber is severely hampered by the lack of a ramp and proper storage facilities. In view of the expected traffic volume which has to take into account the development of the Decoris oil palm plantation and the rehabilitation of the Cavalla rubber plantation, a rehabilitation programme was developed including the construction of a 90 m quay, extension of the storage area by land reclamation and a new log ramp. At present the detailed design is being finalized and a tender for the selection of a contractor is in preparation.

### Social development

In the health sector major attention under Lomé I and II was paid to the improvement of the rural health conditions. The Phebe Hospital in Bong County which has the largest catchment area in rural Liberia and serves as the Bong County general hospital was selected as a nucleus of EDF assistance. A 75-bed extension of the Phebe Hospital, including equipment (ECU 0.47 m), was completed in 1980. To cope with the need for training paramedical staff for the primary health care in the rural areas, the EDF has further agreed to the construction of a Rural Health Training Centre which will provide classrooms, a dormitory, a student centre and houses for the teaching staff (ECU 1.53 m). The



*Coffee plants in a nursery at Bahn in Nimba County*



*Swamp rice cultivation has been introduced to aid the country's transition to cash crops*

centre will be ready for the equipment by the end of this year and forms an administrative unit of Phebe Hospital. In order to establish primary health care in the counties of Sino, Bassa, Nimba and Grand Gedeh, four rural health centres have been built and equipped under Lomé I (ECU 0.77 m).

The deterioration of the economy and consequently of Government's

budgetary resources has had its impact on the above three EDF health projects. The opening of the four rural health centres and the Phebe extension had to be delayed up to 1984 due to a shortage of funds for the operation of the projects. A request for assistance in the start-up costs of the Lomé I health projects is under review.

EDF assistance to the education sector is focused on the technical education. Under Lomé I a ECU 1.1 m programme was designed to assist a junior technical college (W.V.S. Tubman College in Harper) offering a programme of education and training

over three year periods in the fields of architecture, civil, electrical, mechanical engineering and electronics. The main components of this programme were the provision of technical equipment and teaching materials as well as technical assistance for the installation and operation of the equipment.

By the end of 1983 all the equipment was installed and ready for operation. An evaluation study to assess the needs for a continued EDF assistance under Lomé II showed that the existing training level is insufficient to meet the demand of the labour market. The position of the College above the vocational and below the university level has to be redefined and emphasis must be given to teacher training. A package of technical assistance, scholarships, remedial teacher training and a minor building and equipment component has now been identified under Lomé II. This will also include a training programme for the Science and Technology Centre in Harper which was built in 1981 (ECU 0.45 m) and is expected to serve as a remedial training centre for high school graduates who wish to meet the entrance qualifications for the W.V.S. Tubman College.

**Table 1  
Community aid  
to Liberia  
Lomé I**

	<i>ECU m</i>
<b>Agriculture</b>	
Butaw Oil Palm Project	10 00
Coffee and Cocoa Project	2 90
<b>Economic Infrastructure</b>	
Road Project (*)	4 22
<b>Health</b>	
Extension of Phebe Hospital	0 47
Rural Health Training Centre	1 53
Four Rural Health Centres	0 77
<b>Education and Training</b>	
W.V.S. Tubman College	1 15
Science and Technology Centre	0 45
4th EDF Training Programme	1 26
Technical Assistance to MPEA	0 85
<b>Miscellaneous</b>	
Microprojects	0 30
Trade Promotion	0 30
Port Development Study	0 80
<b>Regional projects</b>	6 00
STABEX	7 59
EIB (Subsidy)	1 52
ECSC (Loan)	28 00
<b>TOTAL: LOME I</b>	<b>ECU 68 11 m</b>
(*) Cancelled and not yet re-negotiated.	

**Table 2  
5th EDF  
Indicative Programme  
Lomé II**

	<i>ECU m</i>
<b>Agricultural and Rural Development</b>	
Butaw Oil Palm Project	7 50
Agricultural Training	0 90
Agricultural Credit Scheme	1 00
Microprojct Programme	2 00
<b>Infrastructure</b>	
Harper Port Rehabilitation	8 00
<b>Social Development</b>	
Health	2 50
Phebe Hospital Services	0 60
W.V.S. Tubman College	1 40
Multi-Annual Training Programme	2 10
<b>Studies</b>	
Iron Ore and Mineral Exploration	0 75
Agriculture	0 70
Regional Development	0 50
Alternative Energy	0 20
<b>Regional projects</b>	2 60
EIB	1 21

## Studies

As mentioned above, the tight financial and economic conditions of Liberia have had a stimulating effect on the search for new project ideas. It has been realised by the Government that only timely engagement in studies can result in a higher capital absorption at a later stage. This is essential in view of present funds and also in view of the expectation for Lomé III assistance in the coming year. Following the intention of Government to develop the southeast of the country, a regional study investigating the agricultural development potential and defining an adequate level of economic and social infrastructure is envisaged. Project related agricultural land use mapping and studies into the rehabilitation of irrigated rice structures, livestock and smallholder rubber development are directly responsive to the development targets set for the agricultural sector. In addition, investigations into a mini-hydro scheme and mineral resources which are not related to iron ore are expected to form the basis for a new avenue of EEC-Liberia cooperation.

## 50 years old — Liberia's Civil Service Agency

One of the commonest bottlenecks in the provision of development assistance throughout the ACP States is the technical capacity of the recipient State's administration. Frequently, agreed plans and projects fail to materialise, or materialise only after long delays because the civil service has proved unequal to the tasks assigned to it. Whether the country's administration was copied from the colonial power's system or not, it has frequently not lived up to expectations.

Liberia has been no exception to this rule. Although it has been an independent country for almost a century and a half, it modelled itself, constitutionally and intellectually, on the United States from where its founding fathers came. And, just as in the United States, the most talented people in Liberia avoided jobs in the Civil Service, preferring the law, the arts, politics or commercial life. As a result, the Civil Service was an area of the last resort — and its pay and status were commensurate with that. Whilst Liberia rode successfully through the 1960s and '70s with impressive annual GNP growth rates, this situation was tolerable. Civil servants stamped bits of paper, drew tiny salaries, and were recruited by relatively haphazard methods, usually as retainers and clients of a powerful minister.

The situation could not remain unchanged after the first of economic shocks to Liberia's system. Firstly, the civil service had a real job to do, in attempting to allocate rationally the dwindling resources at the Government's disposal. Secondly, it had to find a philosophy which would enable the civil servants to do that job efficiently.

It was into this breach that the Civil Service Agency stepped. Up to 1973, the Agency had been the rather supine central clearing house of the civil service, dealing with routine matters of pay and conditions, mobility and transfer policy, a sort of personnel directorate without too much of an independent policy-making role. But in 1973, the Agency received its mandate to improve the efficiency of the public service. This mandate covered not

only the central ministries, but government and parastatal organs, and county administration as well. And that covers a surprising range of people: at the moment of writing, the Agency has files and records on 35 406 public servants, in a country of just over 2 million.

Mrs Linnie Kesselly, the Director of the Civil Service Agency, sees herself as the head motivator of a ginger group. There are several areas in which the Agency must give a lead—attitude, efficiency and training—and this lead is intended to transform a Cinderella career into something which will come high on the list of choice of ambitious and talented Liberians.

Attitude, then, is the first target. The Civil Service Agency is clamping down on haphazard and partial recruiting procedures. Entry into any grade, whether clerk or administrator, is by test, and by test only. The Agency, underlines Mrs Kesselly, is not dazzled by paper diplomas—'You can buy a college degree at a pinch—but you can't buy experience'. Practical experience and good sense count much more, and the tests are designed to bring this out. Promotion once inside the service is also based on tests, and here again the main qualities looked for are practical ones. Enforcement of these regulations does not always make the Agency popular and there are often complaints from failed candidates or would-be political nominees.

Next, efficiency. With Government resources scarce, and with Civil Service pay scales attractive (a result of the change of government in 1980), the Agency has developed means for ensuring that civil servants earn their keep. Ministers are obliged to send monthly attendance lists to the Agency, and there are spot checks as well. Where a Ministry fails to keep up the list the Agency simply declines to do any other administrative work for that Ministry—recording promotion, transfers, resignations and so on—and the offending Ministry soon falls into line.

Attitude and efficiency are both af-

ected by training, and the Civil Service identifies training needs, at all levels, designs (with the aid of the Institute of Public Administration) the relevant courses, selects participants and monitors the results. Such is the effect of certain training in the increase of objectivity and a professional approach that Ministers increasingly have to revise their plans in the light of their civil servants' reasoned opposition. Such things build confidence and esprit de corps, and the image of the civil servant is undergoing a transformation.

Obviously, Mrs Kesselly depends on her small team to a great extent and she is the first to acknowledge this. Her 83-strong staff is 'the most self-sacrificial group of young people I have ever worked with'. And her devotion to them is fully reciprocated. When funds were not available for a field trip, a staff member lent the team money until the funds were released. The enthusiasm of the staff tends to rub off on the civil servants from other ministries who come on courses. One such course, run by Britain's Royal Institute of Public Administration on 'Staff Development' has had a ripple effect through the Civil Service, so that ministries all now have their 'RIPA teams', committed to the goal of efficiency.

Mrs Kesselly, whilst exuding the optimism that is vital in such a job, is also realistic. 'It takes at least a generation, if not two, to change attitudes, and we've only had our mandate for ten years'. She is aware that the power she can exert is the power of example and that is not always enough to combat the inertia which is inherent in civil services. But the task is rewarding, and she is already pondering the problems of success—she is aware of the danger of creating a self-satisfied and isolated elite! "We have to walk a tightrope", she said, "between excellence and elitism". And she is aware of a slow but gradual shift in the desired direction — of a self-confident, objective, better-trained and better-controlled civil service that will be able to cope with the demands of an increasingly complex world.

Thus, on the occasion of the Agency's 50th birthday, the Courier can say, in all honesty, "Happy birthday, and many more to come". ◊ T.G.

## BARBADOS

### “Barbados cannot be insulated from the cycles that arise beyond its borders”

“The year 1983 will surely be recorded as one of the most eventful and traumatic in the history of the English-speaking Caribbean. It was a year in which we faced the most profound challenge yet to our social and political system and cherished democratic traditions, a challenge we met with fortitude and unity. There could be no better illustration of our maturity as a people and our readiness to accept the responsibilities of nationhood”.

This is the way Prime Minister Adams, also in charge of Finance and Planning, opened his 1984 budget speech last April. 1983 has indeed been a shaky year for the Caribbean. Not only did the principles of Caricom free trade begin to be hampered by protectionist measures and by the effects of the deepening world economic crisis, but the Grenada invasion also focussed—at least for a while—the attention of international media on the Caribbean.

As a result of the latter events, Prime Minister Adams stepped on the international foreground, yet within the wider Caribbean region and Caricom in particular his political stand on democracy and tradition was already well known.

#### Lessons learned from the past depression

► *Barbados' economy seems to be recovering after several difficult years. What have been the main effects of this period of economic depression and what lessons have been learnt from it with regard to the need to diversify or adapt the economy?*

— The first effect of the depression has been to make us understand that economic activity goes in cycles, and that Barbados cannot be insulated from the cycles that arise beyond its borders. There has been no domestic reason why there should have been a recession in Barbados. The economy had plenty of spare capacity and a well-educated labour force. Expansionary economic policies had not led to runaway inflation, nor had it led to any weakening of the currency. But depression abroad did have a very severe effect on one of our main industries, that is tourism, and a less damaging, but still noticeable effect on our exports. We have had to learn to

Democracy is entrenched in Barbados society: not only has it had a Parliament since 1639, but democracy is really part of the sophisticated, well-educated and information-sensitive Bajan way of life.

Prime Minister since 1976 when his Barbados Labour Party defeated the Democratic Labour Party, John Michael Geoffrey Adams, universally known as “Tom”, is now midway through his second term in office following his 1981 general election victory. He thus followed the footsteps of his father, Sir Grantley Adams, who was not only the first Prime Minister of Barbados, but who was also premier of the 1958-1962 West Indies Federation.

After two years of economic decline, Barbados succeeded in stabilizing its economy in 1983 with IMF support and is now ready to benefit from the upturn in the international economy.

In this Courier interview, Prime Minister Adams, now 52, comments on the trends affecting Barbados' main economic sectors and confirms his belief in Caribbean integration.



**Prime Minister Tom Adams**

*“Our approach to the present economic recovery will be governed by the lessons of the depression of the last few years”*

live in a very trade-dependent world, and I think that's the main lesson that we have learned. The lessons of diversification I think we always understood, and it is our aim to build up manufacturing for export, to the point where it can command the same level of foreign exchange earnings as tourism. I suppose that we've now reached the point where manufacturing exports bring in about 80% of the revenue that tourism brings in. At the same time, we've had to be very determined about agriculture: very determined not to let Barbados fall into the conventional Third World position of agricultural weakness. We have tried to do this and I think that our approach to the present economic recovery will be governed by the lessons of the depression of the last few years.

► *The recession has been tackled with IMF cooperation. How do you assess this IMF intervention and to what extent has it contributed to the recovery?*

— The IMF itself has said that the

only conditions they required of Barbados were to continue the policies of restraint which the Government, more or less, already had in place. To the extent that we were already following policies that would protect the country's foreign reserves, and safeguard its international position, the IMF intervention did not cause us to shift in any way. Nonetheless, we were very grateful to the Fund for agreeing with us on the condition of our economy: that is really the basic point. The money which the IMF has lent us was especially useful from one point of view: it gave us liquidity. Barbados' normal balance of payments difficulties were compounded by an extreme block problem of liquidity in our foreign cash reserves, occasioned by the payments difficulties within the CARICOM region. We have had US\$65 million tied up in the CARICOM Multilateral Clearing Facility (CMCF), a debt which our neighbours were unable to meet. This has occasioned very real problems of reserves management. The IMF funds were a cheaper and extremely reputable way of getting our hands on liquid cash, to match the theoretical reserves which we had. That has certainly contributed to local recovery.

► *As far as this CMCF is concerned, is there any breakthrough to be foreseen in that field? Do you still have US\$65 million outstanding?*

— No, it fell to US\$60 million, but it is probably rising again with the unpaid interest. There is no breakthrough immediately in the offing, although we did reach agreements with Trinidad last year, but so far they have not come to full fruition. That would have given us some ease. But I am hoping to convene a meeting of CARICOM Ministers of Finance next week (1), and at the beginning of next month there will be a CARICOM Heads of Government meeting at which it will be a major issue.

### Diversifying and strengthening the economy

► *What are the main objectives of the recently launched five-year Development Plan, and what sort of Barbados do you hope for upon the realisation of those objectives?*

— You have to read the Plan to see all the objectives. The main one is diversification of the economy: letting the three planks on which we stand—agriculture, light manufacturing, and tourism—all be strengthened. There are sectoral plans for each of those areas. In agriculture we want to diversify our exports. It does seem that non-sugar agriculture is now of about the same value as sugar agriculture: that is one thing that the toughness of the EEC has done for us. But we don't export non-sugar agricultural products to anything like the same extent, and that is an objective. In manufacturing we know that we have to reduce our dependence on the CARICOM market. We must try to export to Europe and North America. Lomé, we hope, will help us with Europe. The Carib-



*The heart of Bridgetown, Barbados' capital*

bean Basin Initiative will help us with North America. In tourism, we will also be trying to diversify — more could be said about that, because diversification in the past hasn't necessarily served us particularly well. We diversified into Britain and Europe, and they were the markets that were most affected by the recession, but that is another story.

There are also many physical objectives in the five-year Plan: improvement of the road infrastructure, improvement of the fishing industry — something that the EEC has helped us with enormously in the past, and which now needs the finishing touches applied to it. There are social programmes, the National Health Service, modelled on the National Health Ser-

vice of Britain, which will begin to come into full force from this year. There are other social security programmes relating to pensions, which we are working on.

The sort of Barbados that we hope for on the realization of the objectives of this Plan, and perhaps two more five-year Development Plans, is a country which will in social security and developmental terms approximate very much, as far as regards citizen satisfaction, the societies that exist in Western Europe. We would like to have the same standard of living as European countries in another 20 years' time. We would like to reduce unemployment, perhaps below the levels that are sustainable in Europe and to a lesser extent in North America. We would like to improve consumer satisfaction, and we would like to maintain the educational advantages which we've always had, but which we think may need to be brought up to date, to make sure that our children are in the forefront of world educational patterns.

► *Can one still qualify Barbados as a developing country?*

— Developing really means not as well off as Europe and North America, it doesn't mean any more or less than that. Barbados is clearly a developing country still, since we need infrastructure, we need a complete social security system—it's a developing country in that sense, and a great deal of capital expenditure still needs to be put into the country. It just wouldn't be possible for us to enter into a debate about whether more production is needed or not, or whether our society would be better with zero growth, we need growth. And countries that need growth, I suppose *ipso facto*, are countries that need development.

### "A bright future" for tourism

► *After its 1979 peak year, tourism has not performed so well. Barbados has now, to some extent, the image of a relatively "expensive" tourist destination. What future do you foresee for this important sector?*

— When I hear hoteliers complain, I wish that we were still an "expensive" destination. They wouldn't be complaining that the rates they are getting for their hotel rooms aren't enough to allow them to repay the

(1) This interview was conducted on 5 June 1984.

Barbados Development Bank, and repay their other debts.

It hasn't performed so well since 1979, mainly because of its loss of the peak-levels of the European and British markets. A part of that has nothing to do with Barbados' image, or Barbados' reality, it has to do with the rise in the United States dollar against the European currencies. It is an expensive destination for British and German people etc., more expensive than it was in 1979 when the Mark stood at B\$ 1.10, where I believe it now stands at less than 80 cents, and the pound was up to almost B\$ 5, where it's down now to B\$ 2.75. In those circumstances, the diversification of which I spoke earlier served us ill because we'd expanded tremendously in Europe and in Britain. In 1984, we got something like 50% more American tourists than we had two years ago, and so the image of the destination as expensive is not affect-



W. Alleyne

*"We are mechanizing very efficiently our sugar sector, I believe we are something like four years in advance of our targets for mechanization"*

ing us in the United States. In fact, it has been cheapened to attract the American visitor. We are given heart for the future, in respect of the other destinations, because the Ministry of Tourism tells us that we are still the most popular destination in this hemisphere for Britain and Germany, outside the continental United States, and Canada. The islands of the Caribbean, be they British, French, Spanish or Dutch Islands, don't attract, in general, as many tourists, certainly from

Britain and Germany, as Barbados does. So the image may not be harming us so much in that regard. What I think we have to be very careful about is not, in a rush, to alter that image and try to compete with the Spanish Mediterranean coast, or with cheap destinations in other parts of the world. We have found that although the number of tourists coming from the United States has increased greatly, we are not really doing any better than we were with a smaller number, because the new tourists are taking advantage of the cheaper packages, and coming for a much shorter time. They are coming for a holiday-weekend with a day added on each way, rather than taking longer family vacations. I think that we have to strike a balance between being too expensive, and being too cheap. If we can strike that balance I have no doubt that we will continue to be attractive to Britain and Europe, as well as to the United States, and we are beginning to rebuild the Canadian market. I think the future of tourism is bright. You can't be the number one destination for major countries, and regard yourself as entirely ill-served by your promotion efforts, or by the value that you give for money, but I do think that we have to improve both of those things.

► *Would cheaper air fares on continental European routes help?*

— Yes, cheaper air fares on continental Europe would help greatly and we are negotiating, not only with the German Government—which is very helpful—but with the British Government—which is less helpful—and British West Indian Airways and the Trinidad Government. We want to improve the position of the domestic airlines flying to Europe, improve the position of the European airlines, and give superior access particularly from Germany to Barbados. The negotiations are in a delicate stage, and they have been going on for a long time. But we have high hopes of them, although I note that one commentator—herself a former Tourist Board Manager in London—has pointed out that cheaper air fares and \$ 15 a day hotel rates will attract tourists, but you mustn't expect them to spend money. As she put it "a \$ 15 a day tourist, is only a \$ 15 a day tourist" no matter where he comes from, and he isn't going to be a huge spender when he gets here.

## Sugar mechanization years ahead of targets

► *How has Barbados tackled the many problems of its sugar sector, and what progress has been made with mechanization there?*

— We are mechanizing very efficiently our sugar sector. I believe we are something like four years in advance of our targets for mechanization. The degree of mechanization is now such, that I suppose over 80% perhaps 90% of the cut cane is loaded mechanically, using local technology, and we have combine harvesters, expensive bits of equipment but that can do the work of more than 50 cane-cutters, which are now taking over in all the flat fields where topography permits. We also have a long-term programme of re-shaping all the sugar fields of the island, so they can be harvested mechanically. Mechanization has moved into the planting and culti-



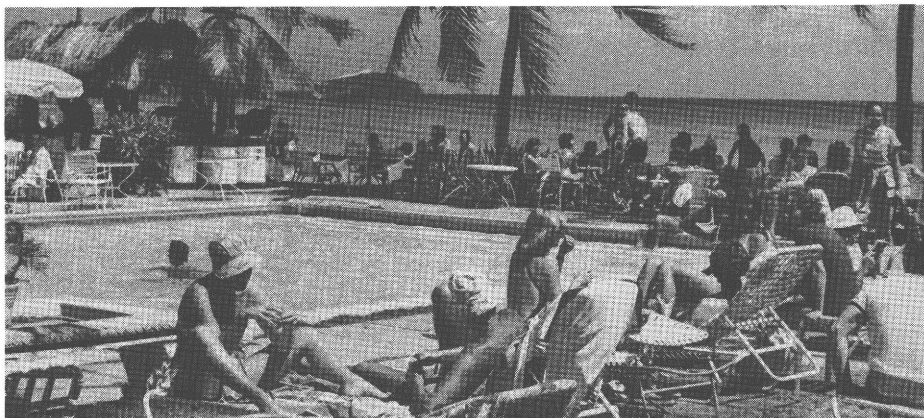
Ministry of Agriculture

*Mechanical harvesting of peanuts. Non-sugar agriculture has boomed over the past few years*

vation also. I'm very glad to see that there are agro-industrial firms which for a fee, will cultivate your field, plant for you, do the fertilization and the weeding — so that you don't have to rely on a labour-force. The reason for this is that it is increasingly becoming harder and harder to recruit agricultural labour in Barbados, as in every nation. But we have to take a qualitative step, if it can be described as such, before the sugar industry is on a secure basis. All successful agricultures in the world depend on government subsidy. Clever governments



give it through the consumer, and richer governments give it through direct payments to farmers. Some countries try to do it through both. Barbados can only afford in the short term, perhaps, to do it through the consumer with government help coming by way of loan subsidies, rather than grant subsidies, such as the EEC and North America can afford. Until we are willing to maintain farm incomes by whatever means we can, the underlying basis of a successful agriculture, whether it is domestic or export oriented will not be there.



*Although ill-served by its diversification into the European tourist market as the US dollar rose steeply against European currencies, tourism still has a "bright future"*

### Non-sugar agriculture stimulated by local demand

► *Non-sugar agriculture has performed well over the past years. To what extent was this intended as a linkage with the tourism sector?*

— Yes, non-sugar agriculture did start off as a link between the tourism and the agricultural sectors. The great fallacy, which is that the amount of a country's agricultural production consumed by the tourist sector is enormous, has been a great help to us in Barbados. Although tourists only eat about 6 or 7% of all the food eaten in Barbados anyhow, the perceived linkage was very important and, paradoxically, tourists eat more local food, than locals do. Expensive local vegetables, the more expensive fish, chicken, fresh milk: these are things consumed very heavily by tourists, and these are things which have expanded. I think though that recently improved income in Barbados has accounted for increased local demand. I'm astonished when I see how many hectares of cucumbers, tomatoes, cabbages etc. are produced in Barbados. We used to think that one good sized sugar estate, if converted into vegetables, could produce all the population needs. That is certainly no longer true, because there has been a real upsurge in local demand. What I would like to see more of though, is the established and potential export crops such as root vegetables and onions. I'd like to see them much more cultivated, along with the exotic crops popular in Europe — I think it's more Europe we have to aim at than North America—such as peppers and egg-plants etc. I'd like to see them improve. So I think that non-sugar has increased substantially because of local demand, and in

the case of fish, which I am including in the non-sugar agricultural sector, import substitution is at work. Previously we only produced half the fish that we eat, now the proportion must be nearer two-thirds. The Oistins Fishing Harbour, financed by the EEC, has been largely responsible for that.

### Offshore business

► *A few years ago, you embarked on the establishment of Barbados as an offshore business centre. How successful has this been and what benefits were derived from it? Also, presently the USA is taking a tough stand on a new taxation treaty with you. Would you comment on this?*

— It hasn't moved as quickly as we would have liked in the banking sector. We have only a very few offshore banks, although one of them writes more business than all the onshore banks combined. Where we've had a lot of movement has been in the international business company sector. These companies have established themselves here, and have met both our conditions and the conditions of the tax treaties of various of our partners, and they have managed to distribute their profits from within Barbados, therefore not attracting overseas taxation. We've been very happy with this, and we've also managed to attract businesses operating in the area. I think they have come, not necessarily for the taxation benefits, which they wouldn't be entitled to if their main business is within CARICOM, but they've come by association, as businesses tend to congregate in one place. The benefits derived from it are principally in taxation. We do have a low

rate of corporation tax on the corporate profits distributed from within Barbados, and one or two businesses—a very well-known Swiss company being the leader—contribute quite substantially to tax collections locally.

We are, of course, having difficulties now with the United States, because of their stand on offshore business centres generally. Therefore the future of the offshore business is in the air until we can come to a definite position vis-à-vis the United States and its taxation treaty.

### Assuring future growth of manufacturing industries

► *Manufacturing export-oriented industries have known rapid growth over the past few years and have helped in cutting down unemployment. However, recently they have been hampered by trade and exchange difficulties particularly within CARICOM. What will be required to sustain future growth of this sector?*

— Diversification, economic recovery in Trinidad and Tobago, and more so even in Jamaica. I think they're the real needs. I also think that we have to get out of the cheap industries. Barbados is not, under any conditions, a centre for cheap labour in the textile business, in the garment business. We are in fact losing some of our more successful industries that work in textiles. A few years ago, the United States complained that we were becoming one of the major suppliers of cotton workgloves to American industry, and this negotiation went on for some time. They asked us to accept a quota, but then the negotiation has been settled by the migration of this

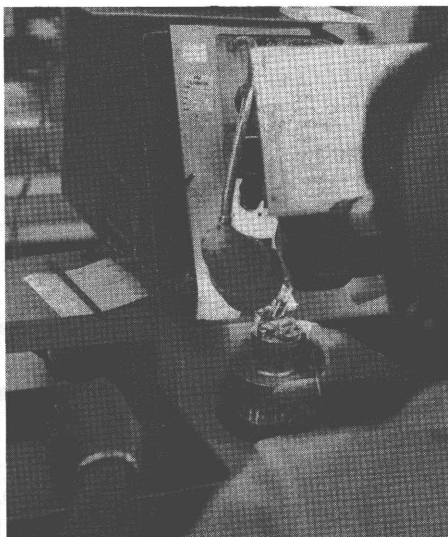
gloves business to St Vincent, where labour is much cheaper.

At the moment the Americans are complaining that Barbados is supplying 5% of all the brassières sold in the United States. Well, I'm glad that for a couple of years we are in this happy position, but perhaps in the future this also will be overtaken by cheaper wages and improved technology elsewhere. We have to get out of the cheap industries, and try to hold on to the high technology industries that have become attracted to Barbados. In particular we are aiming at the enormous employment benefits to be got from the computer chip and other spin-off industries, and also the data-processing business. We've got a couple of big American data-processors operating down here. We have good communications, and we offer a good service. I believe that one airline guarantees to bring the data to Barbados on Thursday, and return it to the United States the following day. And with this sort of service, we think that we will get out of some of the manufacturing and operational difficulties. But the future growth of this sector can only be secured by new technology, and by aiming at a market outside CARICOM.

### **CARICOM: need for economic recovery and political will**

► *Related to those economic difficulties and reinforced by political differences, CARICOM has come under strain. How, in your view, can this second attempt at West Indian regional integration make further progress?*

— I think that the survival of the strains will give us an impetus towards progress, because we really are going through more difficulties than at any previous time. In Trinidad and Tobago, a rather pessimistic view of the country's economy was taken in the first flush of the depression. Still, I think Trinidad has a powerful underlying industrial base. The country is well off, with very substantial foreign reserves, even if they are falling, and the Government now seems to me to have in its hands some of the keys to limiting the demand, consumer demand particularly, that has had such a bad effect on the reserves. I think that Trinidad will stabilize, and its underlying economic power reveal itself:



*"We have to get out of the cheap industries and try to hold on to the high technology industries that have become attracted to Barbados"*

only today I heard that Trinidad is still maintaining its position after the United States and Canada, of being the number one country in the credit ratings of the international bankers who supply these ratings to the magazine "Institutional Investor", and I think that that is a very proper rating.

When Trinidad's difficulties are overcome, there will be many areas where, with Barbados in particular there can be useful cooperation, and closer moves towards regional integration. There is a business sector. This doesn't come much under consideration by overseas analysts, since I suppose the banking and insurance busi-



*People—Barbados' greatest resource. The country wants its children "to be in the forefront of world educational patterns"*

ness in the Caribbean is so small in international terms that it doesn't have a big impact. But we had an insurance treaty with Trinidad, which has in effect driven out from the eastern and southern Caribbean the foreign insurance companies that have dominated in the Caribbean the insurance scene since time began. In the banking sector, Trinidad's banks are, of course, localized. It's not our policy to localize the banks. We are quite happy to have foreign banking participation, it's a part of our economic trust. But I'm glad to see that the Trinidad Insurance Company, is taking over the operations in Barbados of First National City Bank of New York. We think there is a lot of space for the construction of a multi-national business sector in Caricom. There are already multi-national business companies, in Trinidad in particular, a few in Barbados, which operate throughout Caricom, and I dare say that they will start to extend their operations outside the region, probably first of all to Florida, in particular the Miami business sector. I think there is a lot of room for cooperation and integration here.

There are also the enclave manufacturing industries such as the computer industries. I think that there is room, again particularly in the southern Caribbean, for the encouragement of those industries to enter into local activity, so that there can be some integration of production. I mean if a television set is produced in the Caribbean, it is really just a screwdriver job, the essential parts, the important and expensive parts, probably come from abroad. So there too there is room for integration in the manufacturing process. And we are pretty well integrated otherwise. We have a common external tariff — none of us can change the tariff without the consent of the others and we have theoretical free trade between all the component parts. This is threatened by exchange difficulties, and by unfortunate decisions in one or two countries. But I think these are matters, which on the one hand, economic recovery will solve, and on the other, political will can solve.

► *So you are optimistic as to the outcome of the next Caricom summit?*

— I don't think that Caricom will break apart. No, certainly not. The political differences that you've asked

me about, I suppose, relate to Grenada. The Caribbean is fairly united over Grenada. Some governments may not have gone along with the majority in what we did. But we who live here have little doubt that Grenada was supported as well by the majority of the people of the Caribbean, as World War II was supported by the majority of the people of Britain on the one side, and perhaps of Germany on the other. And I don't think that there is any long term damage to be expected from the events of last October.

### Opportunities offered by the US-CBI

► *How do you view the possible impact of the United States Caribbean Basin Initiative at the national and regional levels?*

— You make a distinction between national and regional; unfortunately it's a distinction which the Americans also make, and so we would have to deal with it on both levels. On the national level, the big exporters are bound to benefit: the big exporters in this sense, are Barbados and Jamaica. Barbados may well be the biggest exporter of manufactured products to the USA, I think we probably are. But Jamaica clearly has an enormous potential, and is pointing in that direction. Regionally, I think that there are one or two products, rum in particular, where we should not compete against each other. From that point of view the existence of a regional lobby in Washington for the sale of rum, and

one or two other by-products of sugar, should be maintained. But I think that we have to encourage the United States to view the Caribbean Community as an entity, and encourage the United States to negotiate with us, in areas other than economic, but certainly in economic areas, as much as possible as one grouping. I think we have to discourage the world from seeing us as disunited, and encourage a view of ourselves as a semi-national entity, thinking in a national way.

### EEC aid: earning goodwill

► *After nearly ten years of cooperation with the EEC, under the Lomé Convention what do you think has been its impact, both nationally and regionally?*

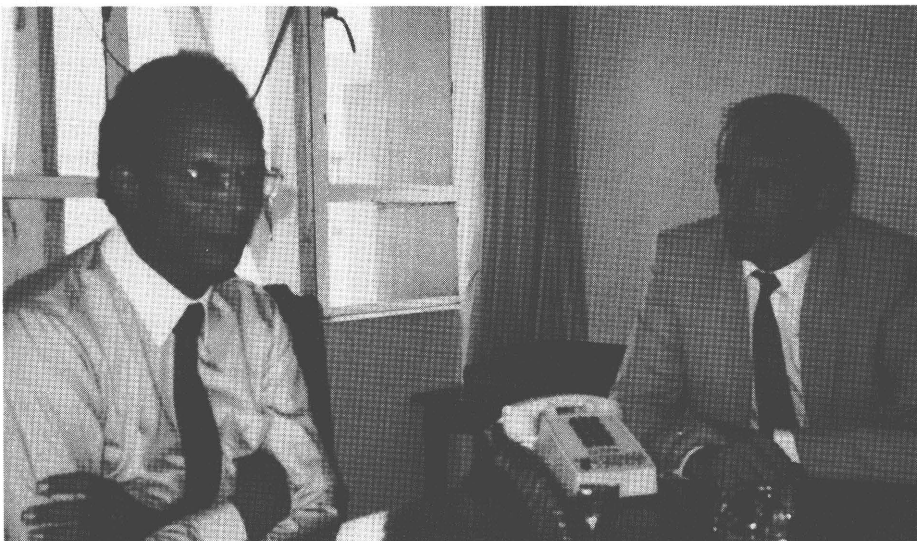
— To start with, obviously the most important thing that the EEC does for us and means to us is the sugar protocol, continued access of our sugar to the European market. It is done in a very niggardly way—I mean the increase in the prices we are negotiating, the percentages are so small that I wonder if the increased income pays the cost of the negotiations. But, nonetheless, the existence of those arrangements does maintain for our agriculture a foundation from which we can take off. At national level, we have had first class cooperation with the EEC as a donor of aid, and we much appreciate it. The Oistins Fishing Harbour in particular, has been a tremendous factor in improving the economic position of fishing in Barbados. The EEC has also given us help

in the social field, in health expenditure. The amount of help, I suppose, per capita is very reasonable, although it only forms a relatively small part of our capital investment. But the way it is given is particularly generous, and useful. I don't think we can ask the EEC representative to walk over building sites, and make sure the materials being used don't come from Cuba, as I hear happens with help from other countries in other parts of the Caribbean. And we don't have to justify the employment of a watchman on an EEC building site with careful reference to the fiscal performance of the Government, and what not, before the aid continues. I hope that we will have more cooperation in the future. The main impact perhaps has been in the goodwill that it has earned, because people now have a view of the EEC that perhaps they would never have had, if they had to rely mainly on what you read in the newspapers, because the aid projects are made real to them.

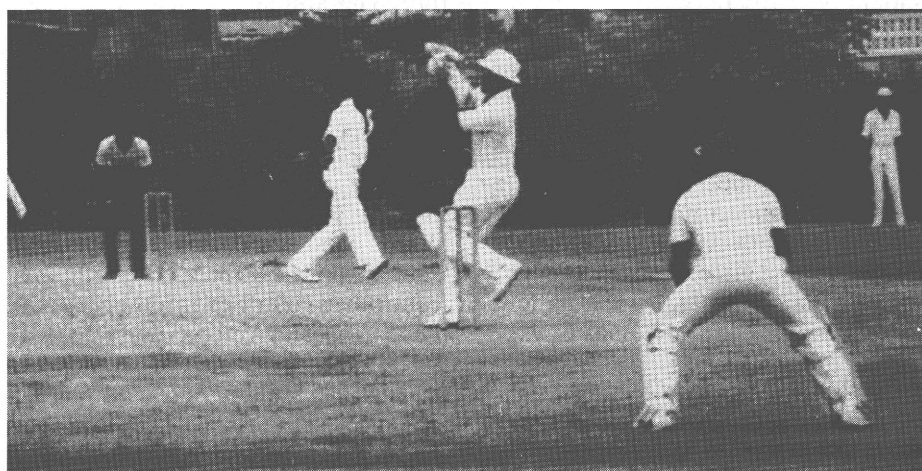
► *As a Caricom member striving for regional integration, do you at any time look at what is happening with regional integration within Europe?*

— Yes, in Caricom we've been fighting a long time to adopt a rule that we hear exists in Europe, that you must be a democracy to continue in Caricom. Of course when you go to analyse your rule, you find it is not so simple in Europe. It's more an unwritten threat than a positively written one. But I think that that is one of the main areas we look at. We haven't looked at a Caricom Parliament yet, that would be too much like the federal West Indies government that failed. But certainly we do look at Europe, and I expect that at the forthcoming Heads of Government Conference, you'll hear from one or more of us—probably from both Jamaican Prime Minister Seaga and myself—that we must without delay improve the political structure of the Caricom Treaty, and make it more like the Treaty of Rome, and the ancillary treaties. At our last Caricom Heads of Government meeting for instance, I seem to remember that the Treaty of Rome and documents dealing with human rights were much in evidence among the documentation, to help us in our discussions. ◊

Interview by  
ROGER DE BACKER



Prime Minister Tom Adams with Johan ter Haar, Commission Delegate in Barbados and the Eastern Caribbean. "The main impact, perhaps, of EEC aid has been in the goodwill that it has earned" feels Prime Minister Adams



## Building a big innings

Barbados has taken some hard knocks from the international recession in recent years. However, with the IMF umpiring, there was a solid partnership at the wicket to get the country ready again to take it to a high score, as it used to in the second half of the 1970s.

Applying cricket terminology to the Barbadian economy may, at first sight, seem somewhat surprising. Cricket is, however, an omnipresent if not dominant leitmotiv in its society. In fact, throughout the West Indies, cricket seems to be considered more as a religion than as a sport. In Barbados it is really a way of life. This solidly democratic nation, strongly traditional, is after all the only Caribbean island to have had only one colonial power, Britain, without changing hands as all others did throughout their history. Hardly any Bajan political leader or commentator will make a statement or comment without at least one reference to cricket. A fine illustration of this was Central Bank Governor Courtney Blackman's reply when questioned on the reasons behind Barbados' noticeable economic progress during recent years: "Just look at our cricket. Throughout the country we have over a hundred very well-organized cricket clubs. The same goes for our economy: if we face an economic depression, we know what to do and get down to the job immediately. Our level of organization avoids us having to take crisis decisions and allows us a choice between different options to tackle the depression best".

### Splendid isolation?

Lying at the gateway to the West Indies, Barbados is the easternmost Caribbean island. It is both small—431 km<sup>2</sup>—and beautiful—George Washington was "perfectly enraptured with its beautiful prospects" as he saw on every side the fields of cane, corn, fruit trees, all in a delightful green setting". It has, of course, all the classical assets of an "island in the sun" offering its tourists the 3S combination, sea, sun and sand, but being one of the oldest English-speaking countries in the New World it also offers a wide range of reminders of a rich past, dominated by King Sugar. Besides these tourist assets, natural resources

are scarce: the generally good agricultural land covers only small amounts of oil and natural gas. Its principal resource is therefore its population of some 250 000 Bajans. Generally well-educated, Bajans are known for their keen interest in public affairs. In their information-rich society they tend to vocalize their opinions quite outspokenly. In fact, as Courtney Blackman illustrated, he may well be "the only Governor having to explain how the Central Bank is financed..." Densely populated by any standards—some 580 inhabitants per km<sup>2</sup>—the domestic market is obviously very limited. The three main pillars of its economy, tourism, sugar and manufacturing industries are therefore geared to outside

markets. However, this makes the country heavily dependent on external economic fluctuations and to some extent the pulse of the world's economy can be taken in Barbados.

### Ups and downs

Having gone through a bad patch following the 1973/74 oil crisis, Barbados' economy recovered well and throughout the second half of the 1970s it achieved an average 5.1% real GDP growth rate thanks to its booming tourism industry and to progressive diversification into manufacturing. In 1980, however, the first effects of a weakening world economy began to make themselves felt, although a bumper sugar crop of 135 000 tonnes, fetching high prices, still made 1980 the fifth consecutive year of real growth.

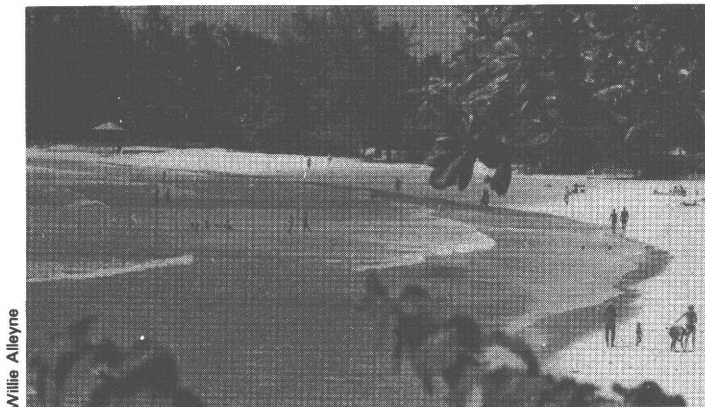
The onset of world recession in 1981, deepening even more in 1982, once more revealed the economy's vulnerability to external economic conditions. Outside markets weakened directly affecting both the tourism and manufacturing sectors. The depreciation of European currencies vis-à-vis the US dollar, to which the Barbados dollar is linked, reduced considerably the country's attraction to European long-stay visitors. On top of that, sugar went sour: both the crop and harvest were severely affected by unseasonably heavy rains, causing production to drop to 94 000 tonnes in 1981, 85 500 tonnes in 1982 and only 85 000 tonnes in 1983. To make matters worse, falling production was accompanied by low world sugar prices.

All in all, 1981 and 1982 saw domestic output contracting by 2.8% and 4.6% respectively and in 1983 real GDP remained virtually unchanged. All major economic sectors declined, with only non-sugar agriculture recording real growth during that period.

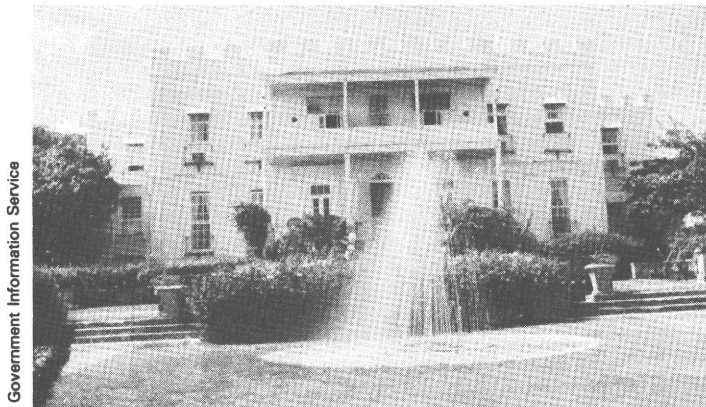
### The IMF umpiring

In 1981, the government finance deficit tripled as against 1980, reaching no less than BD\$ 180 million (1). Not only did GDP decline for the first time after 5 years of consecutive growth, but the net foreign exchange reserves also nosedived, dropping by BD\$ 48 million as against increases in

(1) 1 BD\$ = 0.5 US\$; 1 ECU = 1.54 BD\$.



Willie Alleyne



Government Information Service

*Next to the sea-sun-sand combination, Barbados also offers its tourists a wide range of reminders of a rich past, such as Sam Lord's Castle*

the previous three years. The Government did not wait long, however, before entering into crisis management and imposed a package of fiscal and monetary measures, introducing here too the now world-wide notion of austerity. As Central Bank Governor Blackman pointed out: "It wasn't a real crisis, because that only occurs if you don't know what to do. We for our part had still many options open and were fully geared to adjusting our economic machinery".

One of the options taken up was to bring in the IMF as a back-up for the country's own adjustment programme. Usually blamed by most developing countries for being "a doctor with only one violent medicine to cure whatever economic disease", the IMF-Barbados partnership worked out very smoothly. Quickly agreeing on the state of the economy and approving the already launched austerity measures, the IMF signed in October 1981 an 18-month stand-by loan agreement with Barbados, ending on 31 March 1984.

This was Barbados' way of hitting the crisis for six and in fact it passed all of its quarterly IMF economic tests with full marks. Continued adjustment to outside economic trends remains vital but the way this past three-year "crisis" was coped with leaves the country's managers assured of their ability to adapt in future. "We are consciously facing up to the strategic shifts in our economy" underlines Governor Blackman.

### **CARICOM: changing winds of trade**

Not only did political shockwaves spread throughout the Caribbean as a result of the October 1983 Grenada

events, but economic difficulties in some major Caricom partners and subsequently a number of institutional impediments to intra-regional trade have put Caricom integration under serious strain. In 1983 trade within Caricom contracted by over 13% as against 1982, falling to only EC\$ 1 300 million.

Guyana's generally bleak economic outlook and overall cutting down of imports, Jamaica's equally weak economic health topped by a quota system on all imports, a two-tier exchange rate system and IMF-imposed devaluations, Trinidad and Tobago's economy suffering from depressed oil revenues, triggering off a tight import licensing mechanism and a tough exchange control system all contributed to the strains and in addition most Caricom LDCs also suffered from adverse economic trends. Not exactly an easy situation in which Bajan entrepreneurs could operate. Also, although the country's net foreign reserves increased by BD\$ 32 million to reach BD\$ 220 million by the end of 1983—the equivalent of 10.3 weeks of re-



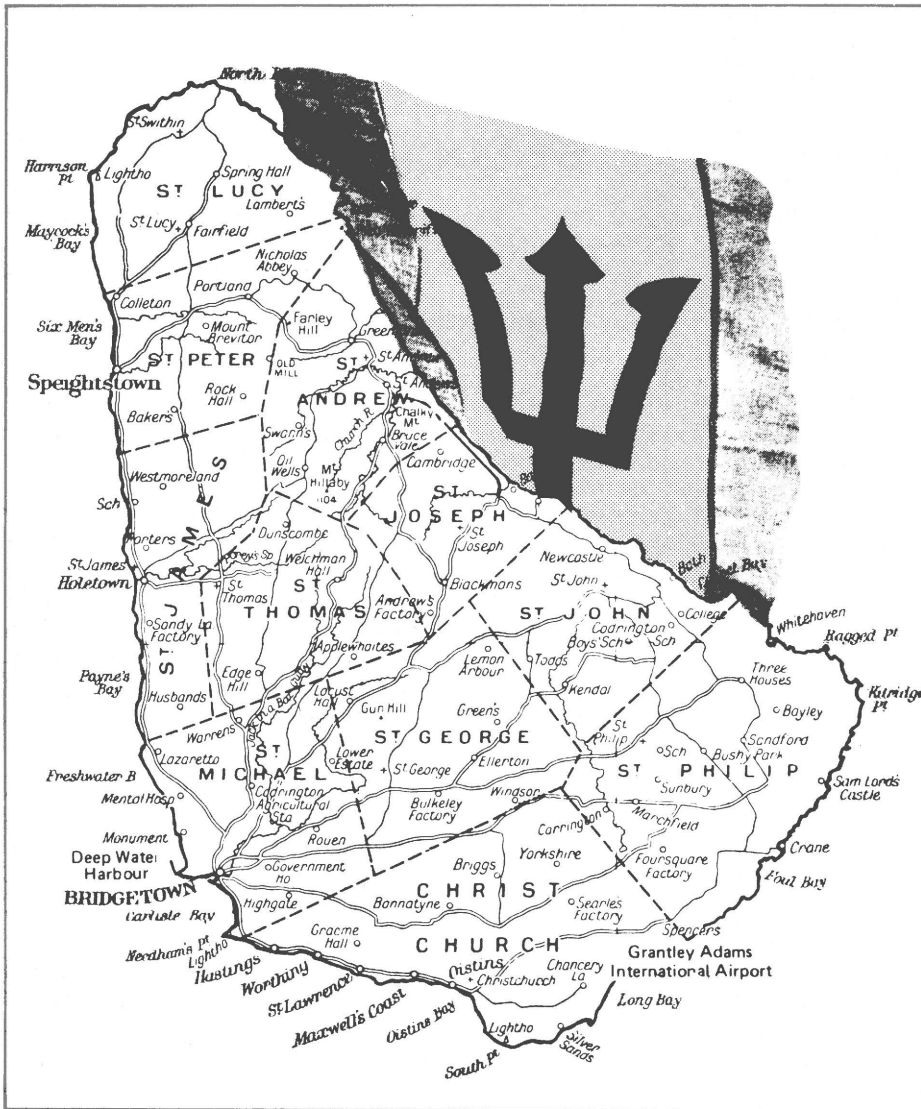
**Courtney Blackman**  
*Governor of the Central Bank*

tained imports—some BD\$ 120 million of this total are still tied up as illiquid credit balances in the Caricom Multilateral Clearing Facility (CMCF). Under the CMCF, a US\$ 100 million credit facility to support trading between Caricom Member States, Guyana owes Barbados some BD\$ 108 million and Jamaica some BD\$ 12 million.

As Oswald Inniss, Assistant Director at the Barbados Export Promotion Corporation pointed out, institutional constraints on trade can make themselves felt quickly. A good example was the introduction by Trinidad and Tobago, Barbados' main intra-regional trade partner, of restrictive trade measures during the second half of 1983. Whereas Bajan domestic exports to Trinidad and Tobago increased by 17.3% from January to July 1983 over the same period in 1982, by the end of the year they had in total decreased by 0.3%. Total domestic exports to the whole of Caricom had grown by 15.1% during the first seven months of 1983 as compared to 1982, but by the end of 1983 the growth over the previous year amounted to a mere 2.2%.

Last July the Caricom Heads of State and Government Summit, gathered in Nassau, stressed the need to revitalize intra-regional trade. Among many other items on their agenda, they discussed the possible resuscitation of the CMCF—now in deadlock mainly due to Guyana running up debts totalling some 98% of the fund—and set up a technical committee which is to present proposals for the discharge of indebtedness to the Facility, as well as the possibility of joining efforts to attract outside donors into a CMCF support fund.

Deputy Prime Minister and Minis-



ter of Trade, Tourism and Industry Bernard St. John is a keen defender of free trade principles within CARICOM. He feels nevertheless that there should be a common approach to work out some form of protection on a regional basis and to combine efforts to tackle extra-regional markets, and that there is a clear need for a body to police CARICOM rules of origin.

Barbados' belief in intra-regional trade cooperation was well illustrated as Minister St. John aired these ideas early in June at a trade exhibition, sponsored by the EDF and organized by the Irish Export Board, of OECS food and beverage traders, held in Bridgetown. At a time of mounting protectionism in the region, it was a clear demonstration of Barbados' preparedness to keep its market open.

### A dynamic manufacturing sector

Throughout the 1970s, Barbados

underwent a quick transformation from a "non-industrial" to an "industrializing" country. Mainly export-oriented, with electronic components—most of them in enclave areas, benefiting from such advantages as tax exemption—as the predominant sub-sector, manufacturing now represents some 12% of GDP and employs around 15% of the labour force. Quite an achievement for a country with little or no natural resources and a very limited market. Skilled manpower, up-to-date physical infrastructure with very good communications and transport, combined with socio-political stability and generally sound management have proven a solid basis to build up and expand this sector.

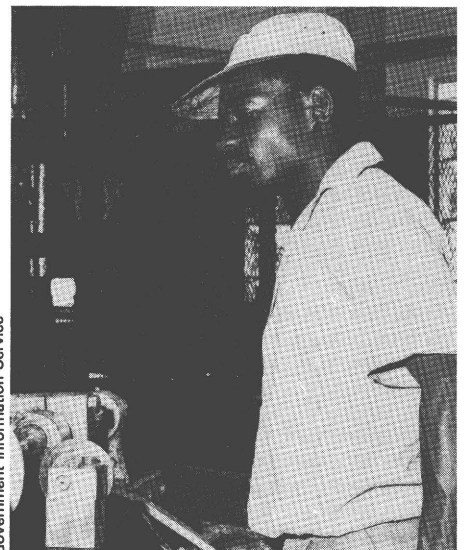
Structurally divided into three main sectors—manufacturing for local consumption, for the CARICOM market, and enclave activities for extra-regional markets—it is obvious that the last two are vulnerable to outside economic imbalances.

As Minister St. John pointed out, a recent study identified four main product-areas with good potential for further growth: electronics, medical instruments, high fashion garments, and data processing equipment. He feels that generally "the country's productive capacity is in good shape and, given the necessary supportive incentives, is capable of continued adaptation".

In view of the trade opportunities offered by the Lomé Convention, the US-Caribbean Basin Initiative and the Canadian GSP, the Bajan authorities feel that further impetus must be given to this sector to achieve even more diversification and structural adjustment of the whole economy.

Frank daSilva, president of the Barbados Manufacturers Association, agrees that "Barbados' future lies in industrial expansion" and sees "excellent scope for mounting joint ventures". In late May the BMA initiated a major private sector consultation, pooling its ideas for possible solutions to problems facing the economy with those of the Hotel Association, the Chamber of Commerce and Industry, the Barbados Sugar Industry Ltd, the Small Business Association and the Barbados Employers' Federation, and this forming an influential lobby group.

"We must tackle our own problems", he stressed, "but although they're not easy to solve we can definitely come up with the appropriate so-



Government Information Service

*The manufacturing sector has rapidly grown over the past few years and already represents some 12% of GDP, employing around 15% of the labour force*

lution". Admitting that Barbados was really no longer a cheap labour market, Mr daSilva mentioned another advantage for industrial development, namely the "mature attitude of our trade unions" and "the accepted level of integrity of Barbados' industrial entrepreneurs". Those entrepreneurs also feel that "Barbados has a clear responsibility to the surrounding smaller islands" and in an attempt to promote private sector public investment cooperation in the region, they want to put up BD\$ 5 million worth of equity in about 6 months' time which, added, to their joint entrepreneurial skills, should allow them to fully benefit from the opportunities offered by the US-CBI.

In the BMA's view, "a solution to the present Caricom trade impasse, or at least the perception of it, may be more easily negotiated if the private sector representatives, naturally with government back-up, became more involved". They of course refer to "officials drafting impractical regulations, for instance on rules of origin", and blame "the mechanisms to change those rules for being too time consuming". So private sector representatives clearly call for more consultation on trade and regulation issues. Admitting the role enclave industries have played over the past decade in the Bajan industrial boom, the BMA president nevertheless insists on the key role genuine local manufacturers will have to play in the country's economic future, certainly in the attempt to curb rising unemployment, up again now to between 15-16% of the labour force as against only some 11% in 1980.

### **Tourism recovering but still walking a tightrope**

"Like a pure gemstone dangling from the far eastern end of the Caribbean necklace of island pearls, one stands apart from the rest". Clearly tourism copywriters have been brainstorming on how to promote Barbados for being "unlike any other island", and in fact in the record year of 1979 no less than 371 000 stay-over visitors paid tribute to what was once known as "the brightest jewel in the English crown".

It was not of course the copywriters' slogans alone which lured them into such a visit. In addition to the classic threesome sun-sea-sand and the

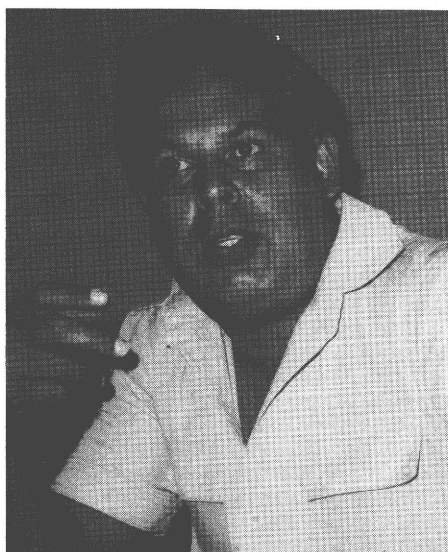


Willie Alleyne

**Bernard St. John**

*Deputy Prime Minister and Minister of Trade, Tourism and Industry*

blessed "climate", also politically speaking, the record figure was, in fact, the culmination of an intensive promotional campaign and the result of a strategy to diversify tourist market sources—basically into the UK and Continental Europe—which paid off. With visitors' numbers rising from 226 000 in 1976 to 370 000 in 1980, and tourist expenditure going up from BD\$ 165 million to BD\$ 502 million, the contribution of the tourist sector to GDP doubled to reach some 12% in 1980. Then, however, the effects of the second 1979/80 oil crisis began to make themselves felt: rising oil prices made air fares go up, unemployment rose and disposable incomes went down in the main tourist markets. The at first successful diversification strategy left Bajan tourist authorities with



**Frank daSilva**

*President of the Barbados Manufacturers' Association*

a bitter taste in the mouth: both the Canadian dollar and most European currencies depreciated dramatically vis-à-vis the US dollar, to which the Bajan dollar is linked, leaving tourists with the impression of Barbados as an expensive destination. After stabilizing in 1980, tourist visits went down by 4.7% in 1981 and by no less than 13.8% in 1982 when only 304 000 visitor arrivals were recorded.

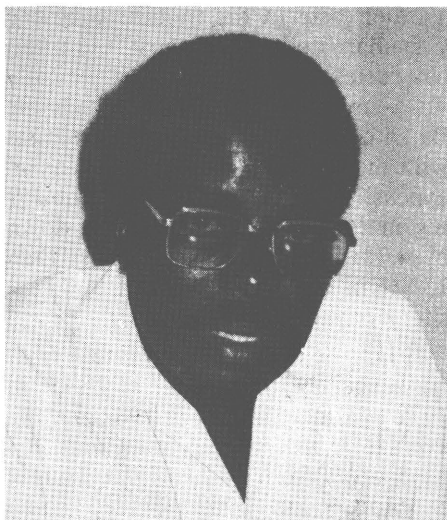
Hotel bed occupancy rates went down sharply from a peak of 76.4% in 1979 to a mere 45.5% in 1982 and the average length of stay was only 8.3 days, down from 10.2 in 1980. Tourist expenditure in 1982 totalled some BD\$ 502 million, 4% down on the previous year.

Last year showed a somewhat brighter tourist outlook, with arrivals growing by just over 8% to top 328 000 visitors and figures for the first few months of this year seem to confirm further moderate growth.

Tourism Minister Bernard St. John admitted that Europe remains a difficult market section to attract but he is convinced that in the long-term it is fully necessary to remain present in that market even if today's short-term economics—a continued very strong US dollar—might indicate otherwise. While warmly welcoming the recovery on the US market and the present upturn in the Canadian market—which used to be the largest tourist market for Barbados in terms of visitors up to 1979—Barbados Board of Tourism Chairman Jack Dear shares the same view on the European potential. "Even if our first major diversification into that market section turned somewhat sour on us, Europe is still a terribly important tourist source for us, offering a potential of long-stay up-market visitors".

Despite the present depression in the European tourist market for Barbados, Minister St. John is very keen on improving air links with continental Europe and, as proof of this, Caribbean Airways, Barbados' national airline, recently started scheduled flights to Frankfurt, its second destination on the continent after Brussels.

He also puts much hope on the Caribbean Tourism Association Office in Frankfurt, which is sponsored by the EDF as a result of the 1979 "European Demand Study". Having started its operation early this year, the CTA of-



**Oswald Inniss**

*Assistant Director at the Barbados Export Promotion Corporation*

Office is to promote the tourist image of the Caribbean as a whole and to facilitate direct contact between people from the trade in continental Europe and Caribbean tourist entrepreneurs and authorities. Building up multi-island package tours will obviously require closer cooperation in the transportation sector between the few airlines still left on the Caribbean-Europe route and local carriers such as LIAT which already offers a US\$ 99 multi-stop holiday fare.

Tourism Board Chairman Jack Dear agrees that attracting tourists now may be a trifle more difficult than before: "Today's traveller looks more acutely for value for money and besides wanting operations to be run for him efficiently and with a smile, he expects more ancillary services added to his basic rate such as water sports equipment. Therefore, if we want to remain competitive, we too have to give that something more". In fact Barbados is now actively involved in adding a touch of sport to its tourism sector, organizing a wide range of events from windsurfing to marathon running in an attempt to attract the more demanding type of vacationer. Mr Dear also feels that "Bajans have become more and more aware that service doesn't mean servility, so we become all the more service-oriented but this requires a perpetual drive from the management". Management should become in his view "even more professional and should not all the time look at the government to solve all their problems".

However, as BMA President Frank

daSilva admitted, most hoteliers take a somewhat gloomy look at their sector. Faced with weakening tourist demand, hoteliers generally react by price discounting to try and curb low occupancy rates. With high fixed overheads and proportionally high payrolls, many of them have little flexibility in their operating costs. Many of them had to turn to a large extent to commercial loans at high interest rates to keep their operations going and this has now become a heavy financial burden. Only recently the Barbados Hotel Association's President Alfred Taylor declared that "the tourist industry is in its worst ever economic position". He pleaded for financial breathing space, including a loan-repayment moratorium, as many hoteliers walk a financial tightrope, clearly risking bankruptcy, and stressed also the need for many hotels to refurbish. BBT Chairman Dear pointed out "the government's awareness of these problems" and feels "it will sympathetically look into this issue" as it shares his conviction that "by the year 2000 more leisure time in the industrialized countries will bring in even more tourists". Meanwhile, in view of increased competition within the region—Mexico, to name only one country that made itself more tourist attractive by devaluing its currency—Barbados will have to try and preserve its competitiveness while safeguarding the profitability of its main tourist operators. After all, tourism in terms of employment, foreign exchange revenue and industrial linkages clearly constitutes one of the mainstays of the economy.



**R.L. "Johnny" Cheltenham**

*Minister of Agriculture and Chairman of the ruling Barbados Labour Party*



**Jack Dear**

*Chairman of the Barbados Board of Tourism*

### **"King Sugar" stepping off his throne?**

Once upon a time, when driving through London in his coach, King George III became very upset when seeing another coach much more magnificent than his own. Being told it belonged to a Caribbean planter he cried out: "Sugar... *all that* from sugar!". Throughout the Caribbean, "King Sugar" has played a predominant role in the social, economic and political well-being of states, including Barbados. Even if in today's Bajan scenery fields of waving cane are still an omnipresent feature,—they still occupy over 80% of the 17 000-18 000 acres of cropland—"King Sugar" seems to be stepping off his throne, non-sugar agriculture making a bigger contribution to GDP than sugar for the first time in 1982 when foodcrops, livestock and fisheries totalled 3.7% of GDP as against sugar's 3.2%.

Agriculture Minister R.L. "Johnny" Cheltenham, also chairman of the ruling Barbados Labour Party, feels that "The sugar industry is faced with a clear challenge to return to viability". Sugar is, in his view, the best illustration of how little control a country can have over the ups and downs of agriculture.

Climatic conditions are obviously beyond control and can affect the crop very badly as was proved by the heavy 1981 rains, but of course lack of rain can be just as damaging. Due to a shortage of agricultural labour, many farmers turn to uncontrolled and illicit cane burning, as burnt cane is easier to harvest than green cane. This, howev-



er, considerably reduces productivity as well as crop output and contributes to soil compaction. Drastic government measures have meanwhile reduced cane burning to only 4% of cane acreage as against 27% some two to three years ago. New diseases affecting the crop also appeared but perhaps most of all beyond the country's possible control was the effective depreciation of the ECU, in which Barbados' 49 300 tonnes of sugar covered by the Lomé Sugar Protocol are paid, vis-à-vis the US dollar. If the EEC guaranteed price of ECU 358.9 per tonne (CIF) for the 1980/81 crop was still equivalent to BD\$ 966.8 per tonne for the 1982/83 crop, the ECU 426.3 per tonne only represented BD\$ 787.6 per tonne. It should be remembered that the cost of production per tonne of sugar was estimated at no less than BD\$ 1 220. In terms of revenue, 1980 sugar exports fetched a record BD\$ 109 million, almost three times 1983's mere BD\$ 37.5 million.

The decline in sugar output and revenue made the government on the one hand look for alternatives in non-sugar agriculture and on the other hand step up the pace of mechanization of sugar production. "The average age of labour employed in the sugar industry is close to 60 and youngsters feel obviously more attracted to the service sectors, like tourism, rather than to cutting cane. Accelerated mechanization based notably on local research into mechanical cane harvesters therefore became a clear necessity" stressed Agriculture Minister Cheltenham. Governor Blackman added: "Hopefully the sugar industry is now in transition to a period of higher productivity based on technological changes and accompanied by appropriate incentives and support schemes". The target is a production rate of 150 000 tonnes of sugar, well above the 1983 crop of only 85 000 tonnes—the lowest since 1948—but this year's production was already up by 18%, totalling just over 100 000 tonnes.

"Better than nothing". In those terms Minister Cheltenham refers to the Lomé Sugar Protocol which he feels "isn't working properly. There is no real negotiation on prices because where the Protocol talks of "a reasonable price within the range...", we always get the minimum price. On top of that there is no compensation for our high transportation costs nor for



*A vegetables' project with sweat peppers in the foreground, cabbages at the centre and tomatoes in the background*

currency fluctuations from which we suffer badly".

### **Non-sugar agriculture on the rise**

The aftermath of the relative sugar crisis had at least one positive consequence: a great deal of attention was paid to diversification into foodcrops. In Minister Cheltenham's view "There is, of course, the perception of the tourism-agriculture linkage and though not completely absent, most of the progress made in non-sugar agriculture is mainly due to the pressures



*Landing "the ones that got away" at the Oistins Fisheries Complex jetty*

of local demand for more vegetables, fruits, etc."

Trying to meet the local market's requirements has, of course, the advantage of contributing to the reduction of the ever increasing food import bill, which from BD\$ 49.2 million in 1970 rose to over BD\$ 162 million by 1982. Crops like onions, peanuts, cucumber, carrots, tomatoes, etc. get much attention.

"For three years running now we have not had to import any tropical vegetables" added Minister Cheltenham. Going for exports is, of course, another matter and requires a careful marketing approach, yet hot peppers find already their way to Britain, and over the past two years Dutch housewives have been buying Bajan sweet peppers.

The Agriculture Minister also gave evidence of the government's interest in developing food processing as well as in promoting fruit production. In the latter sector "Efforts have been deployed only since about three years and it will take another two years for it to make a real impact on our agricultural economics".

While livestock will always be constrained by physical limitations, principally the scarcity of grazing land, and by the high costs of feeding stock, fisheries have undergone a rapid transformation, mainly due to the coming into full swing of the EDF-financed Oistins Integrated Fisheries Complex. Total catch landed peaked at over 6 500 tonnes in 1983 as against only 4 000 and 3 500 in 1981 and 1982 respectively. Clearly it was an investment in infrastructure that paid off well—tourists in that area even con-

sider it nowadays as an attraction, with its lively and colourful setting when boats come in and vendors start attracting the buyers—to the extent that the government wants to develop a similar complex at Speightstown, in the north of the island. Fishing technology has also improved and there are now about 20 iceboats that can stay at sea for up to 20 days at a stretch. The need for fish export markets will soon be felt, but Minister Cheltenham admitted “It is too early for us to know how we can penetrate potential markets, so we will have to look closely into that issue”.

As outgoing chairman of the Carib-

the surface. We therefore want another dimension added, namely that projects which fill a clear gap in the regional nutritional strategy should also be eligible, but the EDF seems to be reluctant on this issue” Minister Cheltenham declared.

### “It is going to be tough to get concessions from Europe”

Deputy Prime Minister Bernard St. John, who with all due respect may be called an “old-timer” of Lomé cooperation—he was President of the ACP Council of Ministers when Lomé II was signed—has a balanced view of

Convention had to operate against a very hostile economic background. For Lomé III, my guess is that the economic environment will be even more hostile. Certainly some things must be changed, like the rules of origin for our products, but it is going to be tough to get concessions from Europe. After all they are not going to solve our problems before they solve their own. Yet a good deal of those solutions may lie in increased trading with the Third World and in fostering growth there”.

### The human software

“Success does not necessarily come to those countries most endowed with natural resources and economic planning departments, but rather to those nations which have been able to develop and deploy their human resources most effectively”. This quote from “The Practice of Persuasion”, a collection of selected speeches given by Central Bank Governor Courtney Blackman, describes well how, through investing in Barbados’ productive base, the Bajans’ skills and creativity, and by providing them with the necessary infrastructure—which he calls “tangible social resources”, such as roads, schools, hospitals, harbours and airports—Barbados has been able rapidly to raise the standard of living of its population. In his view it has enabled the country to achieve social stability, standing for a number of “abstract qualities which enable a society to function effectively: discipline, cohesiveness, the willingness to compromise, community spirit, industry and pride”.

“On the threshold of the twenty-first century, Barbados represents a society which has shed of some of the worst aspects of under-development” says the recently launched new five year development plan, and this is clearly no vain boast if one considers that Barbados’ GNP per capita is estimated at some US\$ 3 000. Through a forecasted injection of over BD\$ 750 million in capital works over the period of the plan, the country wants to face up to a dual challenge: consolidating the gains of the past and using those gains as a springboard for additional social and material progress. If it continues living up fully to its national motto of “taking pride in industry”, there is little doubt it will meet that dual challenge. ○ R.D.B.



Willie Alleyne

*“Discipline, cohesiveness, the willingness to compromise, community spirit, industry and pride” ... yet there is time for fun too*

bean Food Corporation and of the Caribbean Agricultural Research and Development Institute, “Johnny” Cheltenham also puts much emphasis on the Caribbean Food Strategy, which the EDF helps to implement. The scheme, aimed at improving Caribbean regional food security and reducing pressure on foreign exchange reserves—“a major concern for all Caribbean policy makers”—by curtailing food imports, is being carried out by the CFC. Some 17 major projects, 11 of which are already being implemented, are spread over the region. “However, we have difficulty in finding projects in which two or more countries are really involved—after all, arable land is immovable—and many projects seem regional only on

Lomé’s impact on Barbados and the wider Caribbean region. “It is certainly a most valuable form of cooperation, with, in addition to our national indicative programme, which performed well in some key sectors like fisheries, also guarantees general market access and access for our sugar. But perhaps even more important was the creation of a regional momentum making us sit together with a whole lot of other developing countries with whom we built up a solidarity which so far has not been breached. That mere membership in solidarity is very much worthwhile. Yet I am disappointed that the structural changes in our economies have not taken place as expected. World economic recession overtook all growth and the Lomé II

# The National Cultural Foundation

by Andrea GOLLOP(\*)

Established by an Act of Parliament in March 1983, the National Cultural Foundation became operational on February 1, 1984 as the executive agency of the Ministry of Information and Culture with full responsibility for the entire outreach programme of the arts and community development on a national level.

The Government of Barbados sees the establishment of the Foundation as essential to its cultural development thrust, in that it provides a flexible instrument through which policies and programmes may be executed in a businesslike and efficient manner, an instrument that will facilitate speedy responses to the needs of the artists and of the community.

The Foundation has as its terms of reference the following:

- the organization and development of communities;
- the organization of festivals;
- the management of theatres and free standing equipment;
- the encouragement of research;
- the setting up of agencies to encourage cultural activity and the attraction of funding from international sources and the application of such funding to national cultural activity and where appropriate the co-ordination of such activities;
- organizing of training programmes and seminars;
- the raising of funds for scholarships and administration of these funds;
- the administration of Community Centres and generally, the heightening of cultural awareness.

With these terms of reference, the Foundation continues to play an important role in the development of culture as the totality of a way of life and its policy directed towards the development of the individual physically, intellectually, spiritually and emotionally.

The National Cultural Foundation has been instrumental in taking programmes to the communities. It has embarked on a series of thirteen week community education programmes dealing with several aspects of family life, for example health education, budgetting, family planning, husband/wife relationships, parent/child relationships etc. using the total resources of the communities.

(\*) Publicity Officer, Barbados National Cultural Foundation.

These sessions are conducted at the 17 Community Centres spread across the island for which the National Cultural Foundation has direct responsibility. These are only the first in a series of education-oriented programmes planned for the community.

The National Cultural Foundation is also instrumental in setting up community councils across the island, and plans to highlight communities in every sphere and is working on an entirely new programme, "Communities in Focus". Workshops in drama, art, dance and music are conducted throughout the year in the actual communities to give participants easy access to the venues. The type of workshop is determined by the communities themselves.

The National Cultural Foundation is also committed, with the assistance of the Organization of American States (OAS) to beautifying communities by painting murals on existing walls, reflecting the heritage of the particular communities in which they are located. The first such mural has already been completed and work is now being carried out on several others across the island. This particular programme is extremely popular with the communities since the local population is totally involved.

Again with the assistance of the Organization of American States (OAS), a Folklore Society has been established and is working feverishly with committed persons in the community to explore every possible avenue in retrieving our history and folklore. Similarly, the National Cultural Foundation is concerned with local handicraft and through the assistance of the

OAS, we have been fortunate in obtaining assistance in that field and a local Craft Association is now being established.

There are also two annual National Festivals sponsored and organized entirely by the Barbados Government.

Crop Over, Barbados' largest folk festival is celebrated annually in recognition of the sugar cane crop and workers involved in the industry, and as the name implies, commemorates the end of the sugar crop at the end of June. The three week Festival, involves major national events as well as community-oriented activities. Out of this festival comes our calypso competition. Over the past three years a maximum of six hundred calypsos have been produced and recorded for television and radio, and the music industry is certainly flourishing. Crop Over is celebrated and supported by the entire Barbadian population and is fast becoming a major event annually.

NIFCA (National Independence Festival of Creative Arts) as it is called, is the Festival held annually to commemorate our Independence.

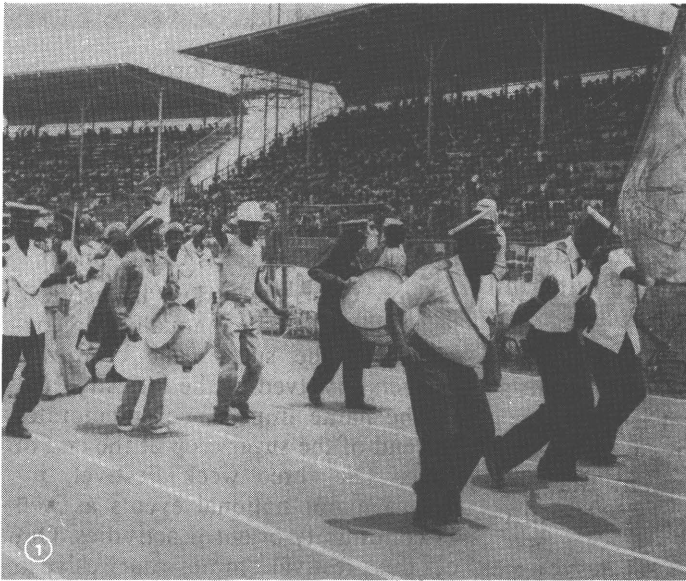
The festival is a competition in all areas and starts at the community level, to parish and on the national level. Successful participants receive awards of gold, silver and bronze depending on their levels of excellence. The festival culminates on Independence Day, November 30.

Other festivals celebrated annually are the Hometown Festival in St. James to commemorate the settlement of Barbados, the Oistins Fish Festival at Easter, and the St. Thomas Festival.

The Guitar Festival is held in February. However, the National Cultural Foundation again has been fortunate in obtaining assistance from Standard Oil S.A. Ltd for the purposes of running a playwriting competition as well as individual festivals in drama, dance and music. These festivals will start in February and continue until April.

On the whole the National Cultural Foundation is totally committed to the total cultural development of Barbadian people, as a people who know themselves and who have "Pride in their Industry", as stated in our national motto. o

A.G.



**Some aspects of Bajan Culture**

① A popular Barbadian phenomenon, "The Landship", as it parades at Crop Over festival

② One of the exhibits at the decorated cart parade during Crop Over festival

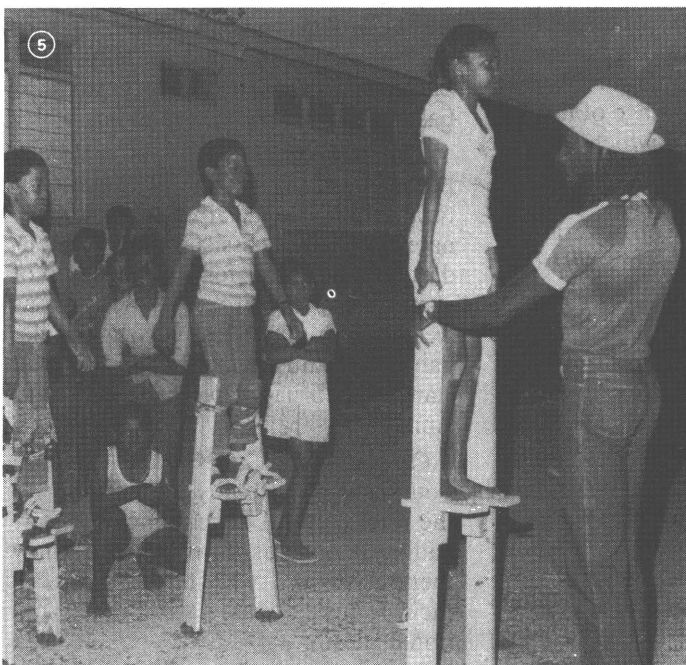
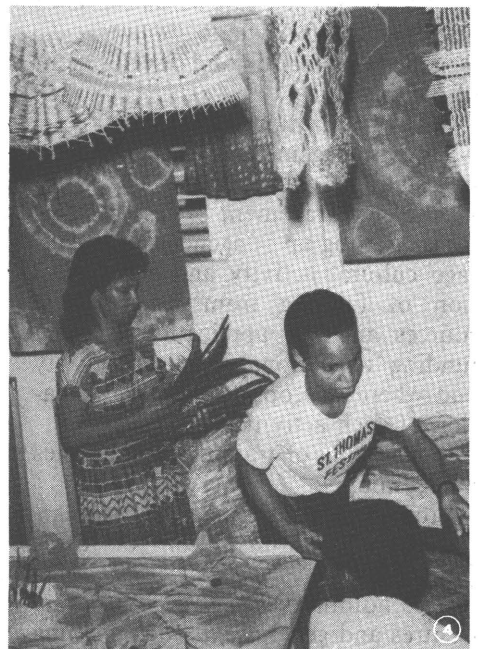
③ Upstairs—downstairs? For many tourists Crop Over festival is a welcome change from sun—sea—sand fun

④ Participants in a costume design programme

⑤ Part of a schoolchildren's programme: teaching stilt walking

⑥ Sensitivity exercises in a drama workshop

**Photos: Stephen Clarke  
Government Information Service**



## EEC – Barbados Cooperation

Barbados has, since the beginning of the Lomé I Convention, been one of the most active members of the ACP Group of States, and has played a particularly positive role during the negotiations leading up to the signature of the Lomé Conventions.

Considering the country's relatively small population of some 250 000 people, the total of the Lomé I and II indicative programmes of ECU 6.4 million is considerable. Furthermore, the European Investment Bank has pursued an active investment programme in Barbados, with approved EIB loans totalling ECU 11.5 million since 1980. Barbados has also derived substantial benefits from the European Community's regional indicative programmes (totalling ECU 88 million under Lomé I and II for the Caribbean), both through CARICOM and several regional institutions, and in particular in the field of agriculture, livestock, tourism, trade promotion, and sea and air transport. Barbados also continues to benefit from the Sugar Protocol (Lomé II quota of 49 300 tonnes) and the Rum Protocol.

Disbursement of the total financial allocation under Lomé I and II represented at the beginning of 1984 approximately 50% of total funds available.

### Cooperation under Lomé I

Without doubt, one of the most successful projects has been the Oistins Fisheries Project, with a total European Community Lomé I contribution of ECU 950 000. The project, officially opened in 1983, has financed the construction of a fishing terminal at the historic town of Oistins, on Barbados' south-west coast. Oistins is famous for the signature, in 1652, of the Charter of Barbados, ensuring the maintenance of the island's representative form of Government during the reign of Cromwell.

Building on the traditional fishing industry, the project, which also had

an important financial contribution from the Barbados Government, assists fishermen and vendors alike by providing a small fishing harbour, including jetty, slipway, maintenance yard and fuel facilities, and simple modular sales stalls, with annexed vegetable stalls, directly accessible to the buying public.

The project necessitated considerable sea reclamation works through the construction of sea defences and back-filling.

Since the commissioning of the Oistins complex, the annual tonnage of landed fish has doubled from 430 to 865 tonnes, while it has at the same time helped stabilize the retail price of

fish. The project is now frequented not only by Barbadians, but also by numerous tourists attracted by the complex's pleasant surroundings and by the traditional beehive activity normally associated with fishing ports. The complex has also been visited by official missions from several Caribbean and Latin American countries, eager to learn from the Oistins experience.

In the social sector, the European Community financed, under Lomé I, the Speightstown Health Centre. Although completed in 1978 at a cost of ECU 370 000, the Health Centre even today looks as if it was opened yesterday. The two-storey building contains a small clinic (8 beds), a laboratory, a dispensary, and facilities for public health personnel. The project provides both preventive and curative health care and dental facilities for the population of the northern part of Barbados, thus reducing the pressure on the facilities of the national referral hospital in Bridgetown. Maintenance of the Health Centre has been perfect, and all facilities function most satisfactorily. During 1983 some 25 000 patients were attended to at the clinic.

Other projects financed under the Lomé I Indicative Programme include financial assistance totalling ECU 100 000 for the Barbados Export Promotion Corporation (BEPC), and the Barbados Board of Tourism (ECU 100 000). Under the former project the BEPC was assisted with the expansion and improvement of its export promotion programmes, as well as with the improvement of the overall structure of the BEPC itself. Project components included technical assistance and consultancies, seminars and in-service training for BEPC staff, and the setting-up of a Trade Information Centre.

The Tourism Promotion Project financed a European tourism marketing study, the production of a tourism promotion film on Barbados, and the publication of miscellaneous tourist promotional materials.

A Multi-annual Training Programme, with an EDF allocation of ECU 300 000, was also financed under Lomé I. A total of 36 scholarships were awarded under this programme, 23 of which were for courses in European training institutions.



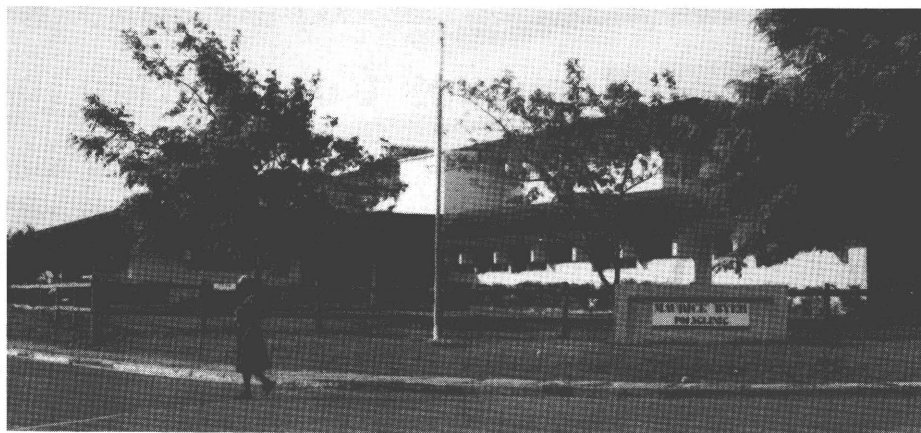
*The Oistins Fisheries Complex, an integrated fisheries landing, processing and marketing facility, benefiting fishermen, vendors and the buying public alike (Lomé I Indicative Programme)*

## Cooperation under Lomé II

Under the Lomé II Convention, follow-up projects have been approved for the BEPC (ECU 175 000) and the Barbados Board of Tourism (ECU 175 000) for similar project activities to those financed under the Lomé I Indicative Programme, and implementation is now proceeding. A second Multi-annual Training Programme, totalling ECU 350 000, was also approved, and is fully committed following the granting of 17 scholarships, 15 of which are in EEC countries, 2 in the Caribbean, and 1 in Swaziland.

In the hills of Scotland District in north-eastern Barbados, a major land conservation and agricultural development project was launched in 1982, with an approved Lomé II Indicative Programme financial allocation of ECU 1 225 000. Under this project extensive conservation work, including terracing, contouring, dam and weir construction and tree planting, has been carried out to conserve both the soil and water in this rugged and relatively underdeveloped part of Barbados. Agricultural activities, going hand-in-hand with the soil and water conservation programmes, include fruit-tree development (limes, avocados, mangoes, cashews, guavas, bananas and Barbados cherries), tree planting for future commercial exploitation and conservation, several livestock activities, and irrigation projects in the valley regions. New feeder roads have opened up major parts of Scotland District to local farmers, thus encouraging increased agricultural production and improving marketing.

It has been decided to utilize the balance of Lomé I and II funds for the funding of two major new development projects in Barbados to assist the Government of Barbados in its efforts to increase the country's food self-sufficiency, the diversification of its productive base, to create incremental job opportunities, and substitute imports through expanded local production. The first project is entitled the National Fruit Orchard Project. Following the recent completion of an EDF-financed study on the viability and required methodology of commercial fruit production in Barbados, a project is now under preparation to expand local fruit production by planting 300 ha of mangoes, avocados, limes, guavas, passion-fruit, grapefruit, pa-



*The Speightstown Health Centre, promoting preventive and curative health facilities for the population of northern Barbados (Lomé I Indicative Programme)*

paya and cherries. The project will be implemented mainly on small-holdings owned by private farmers. Nursery material, research, extension and marketing assistance would be provided by the Government and by the Barbados Agricultural Development Corporation.

The second project is the Fishing Complex at Speightstown, along Barbados' north-west coast. This project will be similar in orientation to the one recently completed at Oistins, although smaller to reflect the smaller number of fishing boats operating from Speightstown. Consultants have been selected to prepare the design of the complex, which will include a jetty and related facilities for fishing boats, cool storage and marketing stalls.



*EDF support for regional trade promotion: Deputy Prime Minister Bernard St. John (right) visiting a stall during an OECS trade mission to Barbados, coordinated by the Irish Export Board*

## EIB interventions

Beside the projects summarized above, Barbados has also benefited from EEC financial allocations outside Barbados' Indicative Programme. Of particular significance in this context has been the role played by the European Investment Bank, which since 1980 has extended loans totalling ECU 11 500 000 to institutions in Barbados. This total allocation comprises two global loans to the Barbados Development Bank (ECU 2.5 million and ECU 4.0 million), for on-lending to small and medium-sized companies in the industrial and tourism sectors, and an ECU 5 000 000 loan to the Barbados Light and Power Company Ltd., for the expansion of electricity generating and distribution facilities.

The EIB is presently evaluating the possibility of extending a loan to the Barbados Port Authority for the improvement and expansion of the Authority's container handling and transmitting capabilities.

## Regional cooperation

Barbados, an active member of CARICOM, benefits to a very large degree from the EEC's regional programmes for the Caribbean. Under these programmes, the Community made available ECU 26 million under Lomé I and ECU 62 million under Lomé II.

Both Lomé I and II programmes are fully committed and disbursements are proceeding well. Some 45 regional projects have been approved to date, benefiting the five million people of the 13 CARICOM Member States. Barbados derives particular benefits from the following regional projects (Lomé I and II):

— Barbados Chicken Hatcheries Ltd. (ECU 2 800 000): a company with equity holdings by the Barbados Government, the private sector and the Caribbean Food Corporation. The project, based at St Lucy in the north of Barbados, aims at producing annually 7.5 million one-day-old chicks for sale in Barbados and other countries of the Eastern Caribbean. Infrastructural development and the construction of buildings and chicken houses have commenced.

— Caribbean Agricultural Trading Company (CATCO) (ECU 2 300 000): also incorporated and located in Barbados, with 51 % equity holding by the Caribbean Food Corporation and the remainder by the region's private sector, the company aims at promoting inter-island trading links in agricultural inputs and locally produced agricultural produce, thus enhancing regional food self-sufficiency. The project will include the establishment of an inter-island small-vessel shipping service.

— Caribbean Food Corporation (ECU 2 000 000): comprises principally a line of credit for investments in small and medium-scale agricultural enterprises. Loans approved include an ECU 460 000 credit to Barbados Packers and Cannery (BARPAC) Ltd. for increasing processing capabilities of foodstuffs, in particular meat products, for local consumption.

— Caribbean Agricultural Research and Development Institute (CARDI) (ECU 4 500 000). CARDI undertakes several programmes in the Caribbean, and its activities in Barbados concentrate on yam tuber propagation and production and applied agricultural research.

— University of the West Indies (UWI) (ECU 14 000 000). Under this project EDF financial allocations are made to the three UWI campuses (Jamaica, Trinidad and Tobago and Barbados). The Barbados campus will benefit from a direct EDF investment of ECU 1 200 000 for building expansion, equipment, research materials, and technical assistance. A scholarship fund totalling ECU 2 000 000 has been set up for students from the Caribbean LDCs to study at the 3 campuses.

— West Indies Shipping Corporation (WISCO) (ECU 6 300 000). WISCO is a regional shipping company owned by 12 Caribbean Governments, and provides a scheduled service between the



*Barbados is benefiting considerably from the EEC's regional programme in the Caribbean. Above: the "Caricom Venture", one of the two West Indies Shipping Corporation (WISCO) cargo vessels purchased with EDF funds. Below: EDF-EIB aid to Leeward Islands Air Transport Ltd (LIAT) comprises the purchase of 4 new 50-seater aircraft*



different Caribbean islands and between the Caribbean and the USA. As part of this project the EDF funded the purchase of two 3 500 ton cargo vessels (the CARICOM Express and the CARICOM Venture); the ships fly the Barbados flag.

— Caribbean Tourism Research and Development Centre (CTRC) (ECU 9 200 000). CTRC has its headquarters in Bridgetown, Barbados. The EDF financial allocation comprises two main programmes. Under the first programme, with an EEC allocation of ECU 5.1 million, several studies have been undertaken, including a study on the establishment of a central hotel reservations system, a tour operator study, and a tourism demand study. In addition, a pool of tourism marketing advisers will be established for CTRC. Other elements of this project include the establishment of an office of the Caribbean Tourism Association in Frankfurt, Federal Republic of Germany, and the provision for this new CTA office of tourism marketing per-

sonnel to promote Caribbean tourism in Europe, as well as promotion material (films, brochures, posters, specialized material and equipment, etc.).

The second project, with a total EEC financial allocation of ECU 4.1 million, aims at improving the quality of the tourism product in the Caribbean. Under this project the CTRC Member States will be assisted in improving their tourism statistics, planning, and development capabilities. Tourism education will be encouraged through the curriculum of the school system. Important training components will also be covered, including management training, in-plant staff training, training in finance and accounting, and training in tourism planning and legislation. Another important component of this project covers the development of handicrafts in the CTRC member States. A total of ECU 1.3 million has been allocated for this sub-project, which aims at improving the quality, production and marketing of crafts in the beneficiary

<b>EEC-BARBADOS COOPERATION</b>		
	ECU	Total ECU
<b>Lomé I:</b>		
Agriculture and fisheries	1 773 000	
Public health	402 000	
Education/training	287 000	
Export/tourism promotion	200 000	
	2 662 000	2 662 000
<b>Lomé II:</b>		
Agriculture and fisheries	2 450 000	
Training	350 000	
Trade/tourism promotion	350 000	
Reserve	550 000	
	3 700 000	3 700 000
<b>NGO projects (EEC contribution):</b>		
Methodist Church (Day Care Centre)	90 000	
National Children's Home (for handicapped children)	160 000	
	250 000	250 000
<b>European Investment Bank</b>		
2 global loans to Barbados Development Bank		6 500 000
Loan to Barbados Light and Power Co Ltd		5 000 000
		11 500 000
<b>Total EEC-Barbados cooperation (national programmes)</b>		<b>18 112 000</b>
<b>Regional cooperation</b>		
Regional EEC-financed projects from which Barbados derives particular benefits (Lomé I and II Regional programme for the Caribbean totals ECU 88 million):		
Barbados Chicken Hatcheries (based in Barbados)		2 800 000
Caribbean Agricultural Trading Co (based in Barbados)		2 300 000
Caribbean Food Corporation (Barbados Packers and Cannery Ltd.)		460 000
Caribbean Agricultural Research and Development Institute (Barbados components)		600 000
University of the West Indies (Barbados campus)		1 200 000
West Indies Shipping Corp. (including Barbados equity)		6 300 000
Leeward Islands Air Transport (15% equity held by Barbados Government)		31 670 000
Caribbean Tourism Research and Development Institute (based in Barbados)		9 200 000
Regional Trade Promotion (based in Barbados)		1 800 000
		<b>56 330 000</b>

countries. Finally, the project will analyse the potential for improving the linkages between tourism and the agricultural sector, in an attempt to encourage increased agricultural production for consumption by the tourist industry.

— Leeward Islands Air Transport Ltd. (LIAT) (ECU 31 670 000). LIAT

is the regional airline, the equity of which is held by 11 Caribbean Governments. The airline serves 15 English-, French- and Dutch-speaking countries with a combined population of 2.8 million. The Barbados Government holds 15% of this equity. Two LIAT projects have been financed by the European Community. Under the

first project, funds have been provided to procure ground handling equipment, repair, engineering, printing and navigational equipment, and the extension of LIAT's workshops. This equipment has already been delivered to the different airports of the countries served by LIAT, including Barbados.

The second project is jointly financed through an ECU 10 million loan from the European Investment Bank, and an ECU 16 million special loan from EDF, to be made to the Caribbean Development Bank for on-lending to LIAT. The ECU 26 million package will be used to purchase four new 50-seater aircraft to replace LIAT's ageing fleet of BAc-HS 748s. LIAT provides an essential public transport facility in the Caribbean, and forms the backbone of several islands' tourist sectors.

For a number of East Caribbean countries not served by any scheduled airline at all, LIAT represents a lifeline, the disruption of which could have extremely serious consequences. LIAT also has a social function, facilitating inter-island travel, providing postal and cargo services, and facilitating the utilization of the region's health and educational facilities.

LIAT's operating constraints have in the past been compounded as a result of the age of LIAT's entire fleet of 50-seater aircraft (one aircraft has made more than 70 000 landings). This dictates increasingly long ground periods for servicing, repairs, maintenance and overhauls, obviously resulting in high maintenance costs, loss of passenger revenue, and disruption of schedules. Of course, the age of the fleet also causes high block hour operating costs, reflecting high fuel and oil consumption.

— Regional Trade Promotion (ECU 1 800 000). This project, based in Barbados and executed by the Irish Export Board, aims at improving intra-regional trade within the CARICOM region, as well as the foreign trade performance of the CARICOM Member States. The project makes provision for technical assistance, market research overseas, trade missions, documentation and promotional material, and export investment and production services. ○

JOHAN TER HAAR  
CEC Delegate in Barbados  
and the Eastern Caribbean



# Swaziland and the European Community<sup>(1)</sup>

Co-operation between Swaziland and the EEC started in 1975 when the first Lomé Convention was signed. This linked 46 countries in Africa, the Caribbean and the Pacific (the ACP countries) to the then 9 EEC member states in a treaty of international co-operation which lasted until 1980. The second Lomé Convention started in that year and runs until 1985. There are now 64 countries and 10 EEC member states.

Negotiations to replace the second Lomé Convention in 1985 have been under way in Brussels since October 1983. The ACP group comprises all present signatories of the Convention and, for the first time, also Angola and Mozambique.

The heart of the Lomé Convention relates to trade and financial/technical co-operation.

## Trade

Lomé generally gives the ACP countries, including Swaziland, duty free access to the EEC market of some 270 million people. This means, for example, that Swaziland pays no duty at all on export of tinned pineapples and pine-wood furniture to the EEC, whereas the same products from across the border in the Republic of South Africa (including its homelands) have to pay more than 20% tax upon arrival in the EEC.

**Sugar and Beef:** Levies are still payable on some agricultural products exported by ACP producers to the EEC. However, 120 000 tons of Swazi sugar are sold every year at a guaranteed price and beef (3 363 tons/year) exports only pay 10% of the EEC levy, thus giving profitable access to the EEC market where prices are high, often double those obtained on the world market. These special arrangements for sugar and beef generally yield to Swaziland some Emalengeni (2) 20 million more than Swaziland would get by selling the same products to other markets.

**Stabex (Stabilization of export earnings):** Incorporated in Lomé is a system to help ACP countries stabilize earnings when export revenues fall due to a drop in price or production. For agricultural products this is called Stabex system.

Since iron ore was one of the products covered by Stabex, under Lomé I, Swaziland received three grants amounting to a total of E13 m to help offset the effects on the run down of exports from the iron ore mine. Swazi cotton and timber exports are also covered by Stabex.

In 1982 Stabex has operated once again as cotton production has been severely hit by drought. The loss in export earnings in 1982 compared to the average of the four previous years was E 3.1 m. This amount has been transferred to a special account at Swaziland Development and Savings Bank in three consecutive instalments (September 1982, October and December 1983). A new claim for 1983 losses is due by September 1984.

The trade aspect of Lomé has thus made, and continues to make, an important contribution to the economic development of Swaziland.

## Financial and technical Co-operation

The EEC provides aid for the economic and social development of Swaziland. Assistance is also provided for projects which help develop co-operation amongst ACP states in the region (SADCC). Most of this project aid is in the form of non-reimbursable grants.

**Lomé I:** During the first Lomé Convention (1975-1980) the EEC provided ECU 12 million for Swaziland's national development programme and a further ECU 5 million for regional co-operation projects with Botswana, Lesotho, Malawi

and/or Mozambique. In addition, the European Investment Bank (EIB) provided loans amounting to a further ECU 13 million for the development of industry in Swaziland. Details of the individual projects can be seen in the lists attached.

**Lomé II:** Spending of the aid under the second Lomé Convention (1980-85) is now well under way.

**National Indicative Programme:** The total for Swaziland's national development programme has been set at ECU 18.5 m, of which ECU 13.8 m in grants and ECU 4.7 m in soft loans (3). The Lomé II programme for Swaziland (see Table 1) reflects the high priority attached by Government to rural development and education at all levels.

It includes:

- ECU 703 000 for continued support of the Science Pre-Entry courses and Science Teacher Up-Grading programme run at the University of Swaziland in co-operation with Free University of Amsterdam (Netherlands).
- ECU 2.45 m to finance the construction of 12 new rural water supply systems in all districts of the country at a rate of 4 systems a year. Construction work for the first three systems in Shiselweni District have started in 1983 and are expected to be finished by June 1984.
- ECU 7.4 m for the completion of Ngwane Primary teachers college at Nhlengano and the construction of new college at Pigg's Peak. Works are due to begin in 1984.

**Regional Projects:** Assistance available under Lomé II for regional co-operation projects between ACP countries within the SADCC region amount to a total of ECU 70 m.

— Several regional projects concerning Swaziland directly have been approved by the EEC Commission in Brussels in 1983:

- Construction and equipment of a new control tower at Matsapha Airport (ECU 2.1 million);
- Three 11 week seminars (1984-85-86) for agricultural managers of SADCC countries at Managa Agricultural Management Centre (ECU 1 million);
- Regional Customs training programme (Lesotho-Swaziland) (ECU 0.5 million);
- Support to Waterford-Kamhlaba School (ECU 0.3 million).

(1) Article provided by the Delegation of the Commission of the European Communities, Swaziland.

(2) 1 Emalengeni = ECU 0.95 (as at 3.7.84).

(3) Spread over a period of 40 years, at 0.75% interest, reimbursement after the first 10 years.

**European Investment Bank:** — The European Investment Bank has already provided ECU 7 million for the construction of a new Lumphohlo Hydro-Electric Scheme and may make further loans if requested.

**Emergency and food aid:** — Swaziland has also benefited from EEC emergency aid for cholera, foot and mouth disease and refugees. Food aid in the form of 662 tons of wheat flour was delivered in 1982. The proceeds of the sales of this flour (some ECU 200 000) are mainly used for the transport from Matsapha to distribution centres of food aid donated through the World Food Programme. In 1983 the EEC provided 300 tons of milk powder (worth some ECU 400 000) and a further 1 460 tons of wheat flour (worth some ECU 700 000). Agreement has been reached for supply of another 2 920 tons of wheat flour in 1984.

### Cushioning the effects of cyclone Domoina

In the light of the unprecedented damage caused to the country's population, to its economy in general and, more particularly to its transport system by cyclone Domoina in January 1984, the EEC provided ECU 100 000 for immediate relief measures, mainly through the Swaziland Red Cross but also for temporary solutions where footbridges had been swept away. In addition, an extra allocation of another 2 920 tons of wheat flour is under consideration.

Taking the trade and aid benefits together, the benefits which have accrued to the Swaziland economy to date from the two Lomé Conventions can be evaluated at approximately E160 m or more than E260 for each man, woman and child in the Swazi nation. ○

**Development projects, funded by the EEC within the framework of Lomé I (1975-80), were widely spread throughout the economic and social sectors and amounted to a total of ECU 12 000 000.**

**EIB interventions (assistance to industrial projects etc.) totalled ECU 13 150 000.**

**Regional programmes from which Swaziland benefited amounted to ECU 5 058 000. ○**

**Table 1**  
**Second Lomé Convention = Lomé II (1981-1985)**

*Value in ECU*

<b>EDF National Programme</b>	
ECU 18.5 million have been allocated to this programme	
For its implementation, priority has been given by the Government of Swaziland to three sectors:	
— Rural Development	
— Development of education and training	
— Improvement of trade relations and tourism	
a) The projects already financed are:	
— Science pre-entry courses and science teachers up-grading (1981-1985) (grant)	703 000
— Construction of 12 rural water supply systems (1983-1985) (grant)	2 450 000
— Multi-annual training programme (including technical assistance, training of Swazis overseas and within the region) (grant)	1 955 000
— Ngwane (Nhlangano) and Pigg's Peak (primary) teachers colleges	7 400 000
Construction and equipment:	
(grant: 4 200 000)	
(special loan: 3 200 000)	
— Micro-projects	163 665
of which:	
— footbridges 73 045	
— Pemba rural project 71 000	
— rural Workcamps 19 620	
— Development of dairy sector study	60 000
b) Emergency aid:	
— Cholera vaccine (1982)	30 000
— Relief for Cyclone Domoina victims (1984)	100 000
<b>TOTAL</b>	<b>12 861 665</b>
c) Projects amounting to approximately ECU 6 000 000 are still under consideration, in particular:	
— credit line for Swazi farmers	3 100 000
<b>EIB Programme in Swaziland</b>	
— Contribution to the construction of Lumphohlo Hydro-Electricity Scheme (loan)	7 000 000
— Interest rate subsidy for this loan from EDF (grant)	2 116 804

**Table 2**  
**EDF regional programme including Swaziland**

*Value in Emalengeni*

A total amount of E 70 million is available for the financing of projects concerning more than one country in the SADCC region. Swaziland has presented projects mainly together with Lesotho, Botswana and Malawi

*Projects financed are:*

— Extension of Matsapha Airport (construction of new control tower) (grant)	2 100 000
— Mananga Agricultural Management Centre (three regional training courses for SADCC citizens) (1984-86) (grant)	1 000 000
— Regional customs training (Lesotho et Swaziland)	504 000
— Waterford-Kamhlaba School (Lesotho and Swaziland)	316 000
— Study on criteria for success in regional training institutions (completed)	50 000
— Training needs of the SADCC sugar industries	90 000

*Projects under preparation:*

— Regional posts and telecommunications training (Botswana, Lesotho, Malawi and Swaziland)	±1 200 000
— Study on training needs of Mining Industry	
— Regional railway training, phase II	2 000 000

# Description of budget/consumption surveys<sup>(1)</sup>

The primary aims of the budget/consumption surveys are to estimate the extent of household consumption and to obtain a picture of the expenditure and income structure permitting calculation of the weighting coefficients used in various economic indicators.

Another interesting use to which these surveys can be put is the comparative analysis of standards of living in various social categories or regions etc. with a view to determining certain behaviour patterns as regards consumption, expenditure and income.

The results of surveys conducted in Africa up to 1970 show that, with very few exceptions, the balance between the income and consumption of a household is misleading since it relates only to that proportion of resources and activities for which money changes hands, whereas in Africa many of these things are not subject to market transactions (particularly in the food and housing sectors). However, they must be taken into account if we are to obtain a picture of consumption behaviour. From the point of view of standard of living, incomes are not a priority subject for surveys since acquisitions and consumption provide a good yardstick. Hence the emphasis is placed on consumption by household, i.e. the use of goods and services by the households themselves, excluding any professional uses.

## Inventories

With a view to meeting information requirements in those countries where the statistical machinery is for the most part very limited, attempts are made to draw up inventories on demography, agriculture and household incomes and consumption. However, exhaustive inventories are unwieldy and expensive and, furthermore, the information should not be limited to the national level taken as a whole, but rather the differences between social groups, regions or rural and urban districts etc. should be compared.

(1) Article written by J. Schwartz for EUROSTAT (Luxembourg) — Mr Schwartz is a French economist from INSEE (Paris) attached to the co-operation section of the French ministry of External Affairs.

All these factors have led to the use of sample surveys, samples being taken on a temporal basis (as a function of the frequency of the phenomena under consideration) and on a spatial basis (as a function of the geographical distribution of the statistical units).

## Comparative analysis

This procedure permits a comparative analysis of the social groups and the various regions by means of samples numbering only a few hundred households, which are carefully selected on the basis of certain characteristics with a view to ensuring representativeness of each social group, and monitored over a long period by means of periodic interviews. The reference period for the survey is the year, since this permits coverage of the majority of regular acquisitions and seasonal fluctuations connected either with agricultural production, which is an important factor in Africa because of the prevalence of subsistence farming or socio-economic rhythms.

This period will be covered in dif-

ferent ways, depending on the frequency of acquisition of goods and use of services.

It will be possible, on the basis of the information thus obtained and with a view to comparing the expenditure structures, to show how one category devotes more of its resources of money to a particular product or service in comparison with another category. This comparison will be informative particularly if expressed in terms of value relative to total consumption, since it is these relative values which are used, for example, for weighting the various expenditure items in the consumer price indices.

Other important uses for the results are as follows:

- determining coverage rates for family needs;
- estimation of minimum income per family necessary for an adequate standard of living;
- determining income distribution;
- comparing the various consumption models;
- drawing up the household account in the national accounts.

## Some examples of the use of the results of a survey on household incomes and consumption

The best-known use of the results of a survey on household incomes and consumption is the fixing of weightings for expenditure groups and items in a consumer price index. Frequently, this is the only justification given for carrying out a survey which, by its very nature, involves long and difficult field work.

The examples given below, taken from publications issued by the Ministry of Planning of the Republic of Tunisia, which has a long experience of household surveys, illustrates, however, the wealth of information which can be obtained by those responsible for managing the economy of a country, from both the description of trends in household characteristics and forecasts of the way households will react to certain contingencies.

### I. Poverty threshold and identification of less-favoured sections of the population

A less-favoured section of the population is one living on a per capita income which is below the poverty line. "This poverty line ... is considered to be the standard of absolute poverty, such that sections of the population with an income level lower than this threshold are very likely to live in conditions of absolute poverty". The method of calculation is based on minimum energy requirements, the average cost of a calorie and the pattern of food and non-food consumption. According to the results of the two surveys on a) budgets and b) food, the poverty threshold is esti-

mated at 120 dinars (1) per person per annum in an urban environment and 60 dinars per person per annum in a rural environment (2).

The proportion of the population thus identified is calculated from the survey results and can be broken down according to environment (rural or urban), region, size of household, socio-professional category of the head of household and economic activity of the head of household. The fact that the same data are available for 1975 means that this social indicator is a much more precise tool for those who are managing the economy than the final consumption of households alone, as supplied by national accounts. It is also possible by this method to identify the regions and categories of household for which special efforts should be made, either in the form of projects for those specific regions or social measures for particular categories (3).

## II. Forecasts of the reactions of households to higher incomes

Reliable data on the way households react when they have higher incomes to spend would be extremely useful to those responsible for the economy of a country. In developing countries, these increases may take the form of higher wages (all the higher for being less frequent) or increases in the world prices of products bought from the producer.

What do households do with their higher incomes? What proportion is saved and what is spent? Which sectors of the economy (corresponding to the expenditure groups and items) will be subject to the highest increase in demand? A household budget survey can provide valuable information, particularly if the quality of the survey

(1) 1 Tunisian dinar = 10 FF = 2\$ US (in 1980).

(2) Extract from "Enquête sur le budget et la consommation des ménages 1980" Volume 2: results of the budget survey, page 69, National Statistical Institute, Ministry of Planning and Finance, Tunis.

(3) This article aims to give examples of the use of results and not to describe the results obtained by a particular country. Interested readers may refer to the national publication. It is interesting to note, however, that between 1975 and 1980, the numbers of people, in both relative and absolute terms, living below the poverty line decreased considerably but this decrease was not evenly spread over any particular environment or region.

makes it possible to analyse the results by categories and regions (4).

The concepts used in this case a) the marginal propensity to consume product (or service) X, (for example, if income increases by 100%, and consumption of X increases by 5%, the marginal propensity would be 0.05) and b) expenditure-income elasticity, (for example, if income increases by 10% and the consumption of X increases by 15%, the elasticity will be 1.5).

Expenditure groups	Large towns	Urban areas	Rural areas
Food	0.58	0.62	0.72
Accommodation	1.26	1.38	1.65
Clothing	1.18	1.12	1.08
Health and hygiene	1.09	0.93	1.05
Transport and communication	1.61	1.88	1.27
Education, cultural and leisure activities	1.12	1.01	1.05

Elasticity much below 1 indicates that the product is not very sensitive to changes in income, and thus that the level of consumption varies very little. This applies, for example, to basic necessities. On the other hand, elasticity much above 1 suggests that so-called "luxury" products are very sensitive to changes in income.

For Tunisia in 1980 the elasticity coefficients for household expenditure according to environment are shown in the above table: (5)

Elasticity thus varies from 0.58 for food in large towns to 1.88 for transport in urban areas. Within the group "food", which is, of course, in the "basic necessities" category, coefficients vary from 0.18 for cereals to 1.19 for fruit.

Using product consumption and reckoning on an average annual increase in the total per capita consumption of 3.5%, the Tunisian statistical services were able to provide forecasts of demand levels up to 1986, in order either to identify projects which could help to meet the increased demand or to forecast the points at which national supplies would be stretched and demand for imports would arise.

(4) Macro-economic forecasts of the reactions of households cannot be based on the results of a household budget survey alone. Other surveys are necessary, such as those on the purchasing intentions of households or interviews on the current situation. But information taken from household budget surveys, when available, is much more reliable than many macro-economic global models.

(5) "Enquête sur le budget et la consommation des ménages". Op. cit. p. 150.

## III. Forecasts of the reactions of households to higher price

It would be a serious mistake to confuse the lack of sensitivity of a product to changes in income with the lack of reaction of households to price movements in the same products. Cereals are a case in point: the 0.18 elasticity for this product in an urban environment shows quite clearly that a rise in income does not lead to any noticeable rise in consumption. But is

also means that a drop in income (or a price increase, which amounts to the same thing) will not lead to lower demand.

Any household which cannot substitute another product for the one in question and cannot decrease the amount which it requires, for physiological reasons, will thus feel the full impact of any price increase which will lead in turn to a lower consumption of high-elasticity products (and consequently to a complete disruption of the economy). It is thus normal that the most violent reaction should come from the large towns (in rural areas, the elasticity for cereals is "only" 0.31) and within the large towns from social groups which would be easily identifiable if the survey results were analysed in more detail. It would thus be easier to work out, if not to finance, economic measures which ought to accompany such price rises, which are now becoming increasingly frequent.

These three examples of the use that can be made of the results of a household budget survey should suffice to illustrate the wealth of information which such surveys can provide, although often, unfortunately, full use is not made of this information for lack of human resources when the analyses are carried out. These examples are also a plea for the help that statisticians in developing countries could give to their governments when certain difficult economic decisions are being made. ◊

J. SCHWARTZ

## The Fontainebleau Summit

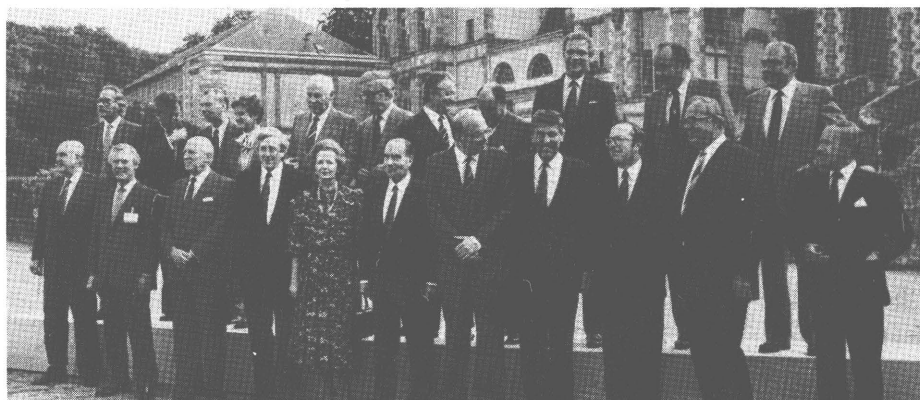
### A boost for Europe

A sigh of relief was the reaction in European circles to the news of the outcome of the European Council in Fontainebleau on 25 and 26 June. A few days before the end of France's term of office as president of the Community and following several failures at earlier summits, including Athens and Brussels, Europe could at last see the light at the end of the tunnel. The Heads of State and Government of the Community countries had just solved the problem of Britain's contribution to the EEC budget. This removed the final bone of contention that was blocking the solutions that had been found at the previous summit to other important issues such as enlargement of the Community to include Portugal and Spain and own resources for the Community budget.

The United Kingdom will receive a lump sum of ECU 1 000 million for 1984. For subsequent years it will be granted a reduction of 66% on the difference between its VAT contribution to the Community budget and Community expenditure in the U.K. However, it was pointed out at the summit that this was not solely a "British" problem and this was why a principle had been established whereby "any Member State sustaining a budgetary burden which is excessive in relation to its relative prosperity may benefit from a correction at the appropriate time. The basis for the correction is the gap between the share of VAT payments and the share of expenditure allocated in accordance with the present criteria". The Ten also reaffirmed the need to come to grips with Community expenditure, which, in their eyes, was the best way to iron out budgetary imbalances — especially since it will not be until January 1986 that the Community will be given a new lease of life in the form of an increase in the "liquid" VAT ceiling from 1% to 1.4% (and possibly to 1.6% later).

Commenting on these decisions during a brief press conference, Mrs Margaret Thatcher, Britain's Prime Minister, welcomed this solution as being a good deal for Britain and for the Community, and one which put an

end to her long search for a more just Community on a sounder financial basis. The decision is satisfactory for the British because it meets the four criteria on which they had been insisting — it fits in with the decisions on own resources; it may be changed only by unanimous vote; it is linked to the concept of relative prosperity and it should ensure the fairer distribution of the financial burden.



*Happy smiles from the Heads of State and Government*

Another of Europe's leaders was also delighted—François Mitterrand, President of the European Council—since he was able to finish his term of office in style. The agreement was mainly his work, since it was he who had prepared the summit by touring the different European capitals for exploratory talks with all his counterparts. For France's Head of State Europe was given a really good boost at Fontainebleau since the issue of Britain's contribution had been blocking a number of very important decisions that had been taken, notably at the Brussels summit. It had also been very difficult to have any substantive debate on policy, on European Union or on the Community's political union as long as such a troublesome millstone was hanging around its neck.

The European Heads of State and Government felt that it was necessary to undertake a series of actions which should have a psychological effect on the various nations of Europe and make them aware that they belong to one and the same unit. Among the measures envisaged is the introduction of a single document for the move-

ment of goods. This has already been decided upon in principle; all that needs doing is to make detailed arrangements. It was also decided that the European passport, which was decided upon in principle several years ago, should be available to European citizens before 1 January 1985. Then there is the abolition of frontier formalities (France and Germany have decided to abolish without delay all checks on people passing from one country to the other), the equivalence of university diplomas, a European flag and anthem, the formation of European sports teams and so on—and

even the minting of a European currency unit, the ECU.

Lastly, it was confirmed at the Fontainebleau Summit that the guidelines drawn up at the previous Council concerning the financial package to be made available under the forthcoming ACP-EEC Convention would stand. Mr Mitterrand declared that the African, Caribbean and Pacific countries would be treated in the manner that had been decided, in other words the overall package in real terms, which had been discussed in Brussels, was to be confirmed — aid was to be kept up and not reduced.

Commenting along with Mr Mitterrand on the results of the European Council, Gaston Thorn, the President of the Commission, whose term of office is due to finish at the end of the year, said that he was sorry that the budget problem had not left enough time for going more deeply into measures to promote a people's Europe. However, he added that "the way is now open again for enlargement and for many new policies—at last we should be able to take up the challenge of the present!" ○ A.T.

## Equal opportunity for women<sup>(1)</sup>

In the European Community 52% of women aged between 14 and 59 have a job or are looking for work. The proportion is increasing under the double pressure of women's desire for independence and their need to boost family income.

Out of a total working population estimated at 118 million, women account for about 44 million. Of these 69% work in services, 25% in industry and 6% in agriculture.

Women are also to be found amongst Europe's unemployed. In fact, there are more women out of work than men, in proportion to their share of the total workforce. Women make up 41% of Europe's jobless. They are often the victims of the fact that their training is no longer suited to present-day economic needs.

The recession has also made women's jobs more vulnerable.

Unemployment has, indirectly, had a negative effect on the rights of women.

At the same time, women occupy 90% of Europe's part-time jobs. Such jobs frequently carry the same benefits as full-time work. They rarely lead to promotion or a more responsible job.

The employment of women raises other problems, which cannot be illustrated in figures. Equality in education and training, equal pay and equal social security rights are objectives set by society. But in many cases there is still a wide gulf between principle and practice.

The European Community is constantly striving to improve the lot of working women as part of its efforts to better the working and living conditions of all its citizens. Thus:

— Article 119 of the Treaty of Rome, the agreement which created the Community in 1957, states that 'each Member State shall... ensure and... maintain the application of the principle that men and women should receive equal pay for equal work'. The chief reason for including this article at the time was undoubtedly economic. It was necessary to avoid a situa-

tion where fair competition between Member States of the Community would be distorted by lower wages for women, compared with men, in some Member States. But later events show that social considerations gradually took over.

— At the Paris Summit in 1972, the Community Heads of State or Government agreed to create a European social policy.

— The European Commission drew up a social action programme, including measures in favour of women. In 1974, the Council of Ministers of the Community agreed to take steps to ensure equality between men and women in access to jobs, training, work conditions and wages.

— As a result of this agreement, the European Commission drew up a series of action programmes. In 1975, it published a memorandum on equal pay for men and women. In 1981, it tabled a new programme dealing with equality of opportunity. This was ap-

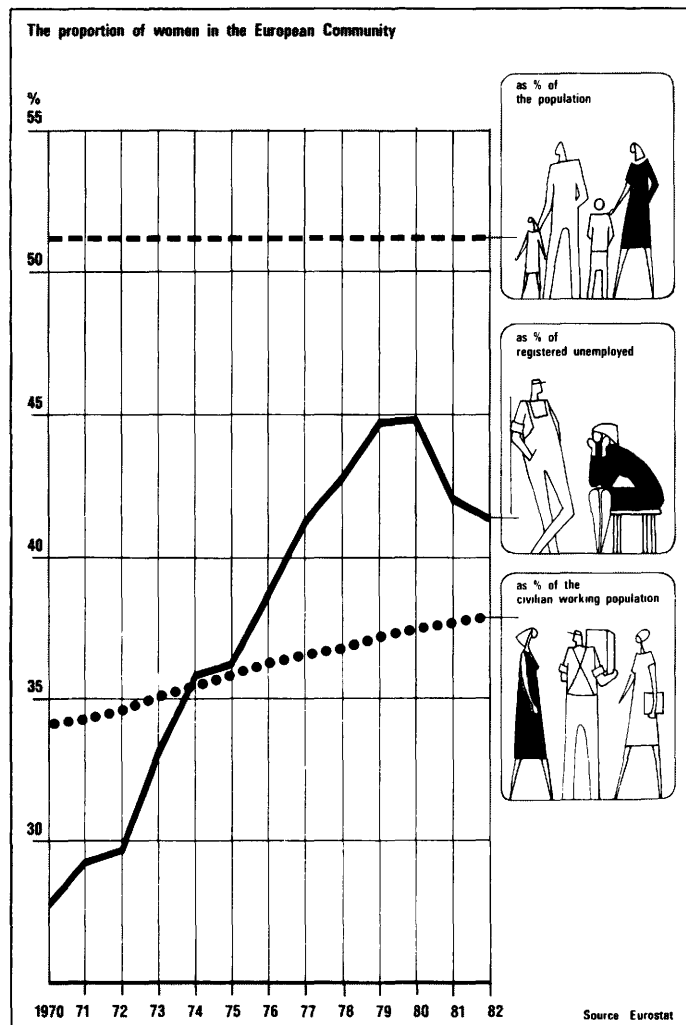
proved by the Council of Ministers in July 1982 to cover the period up to the end of 1985. The programme created a consultative committee on equality of opportunity, grouping representatives of similar organizations in the Member States. The Committee acts as a liaison between the work of these national bodies and helps the Commission to implement its action programme.

— The European Parliament has also shown an active concern for the problems of women and set up a special women's committee in 1979. An important debate was held in January 1984 on the problems of women.

### Equal pay

Community efforts to ensure equal pay between men and women have included:

— Forbidding the payment of lower wages to women who carry out the same work as men. Article 119 of the Treaty of Rome is explicit on this



(1) Source: Directorate-General for Information, Commission of the European Communities.

point: 'For the purpose of this Article, "pay" means the ordinary basic or minimum wage or salary and any other consideration, whether in cash or in kind, which the worker receives, directly or indirectly, in respect of his employment from his employer. Equal pay without discrimination based on sex means: that pay for the same work at piece rates shall be calculated on the basis of the same unit of measurement; that pay for work at times rates shall be the same for the same job.'

the European Court of Justice. There have been many such "preliminary rulings". Perhaps the best known is the Defrenne case. This involved a complaint by a Belgian air hostess that she was being discriminated against in comparison with her male colleagues. The Court judgment drew attention to the clear commitment given in Article 119 of the Rome Treaty to equal pay for women. An important recent case involved a Mrs J.P. Jenkins against Kingsgate Ltd. The Court ruled that a

often opt for shorter education and training periods, offering lower qualifications and poorer job opportunities; — the impact of family responsibilities—marriage and child-rearing—on women's careers. Often the problem is caused as much by the exaggerated fears of employers as by the actual effect on a woman's working life; — the predominance of women—partly for the above reasons—in a narrow range of jobs, needing the least qualifications and offering the lowest pay and promotion chances.

To tackle these problems, efforts are needed to change the attitude of men, women and employers alike. But there must also be adequate legal safeguards. A European directive, adopted in February 1976 and applicable since 1978, obliges Member States to guarantee equal treatment for men and women in working conditions, access to jobs and professional training. By equal treatment, the directive means the complete absence of discrimination based on sex, matrimonial or family status. Once again, national laws had to be swept clean of all discrimination. The European Commission has taken offending States before the European Court. Workers must have the opportunity for legal redress without fear of losing their jobs.

A series of draft directives with important implications for working women were tabled or amended by the Commission during 1982. One of these proposals suggested increased protection for part-time workers. The other suggested similar protection for temporary employees.

The new Community programme to promote equal job opportunity for women complements this legislation on equal treatment. It aims to bolster individual rights through concrete efforts to positively promote job opportunities. Against the background of the recession, which has worsened discrimination against women, equal opportunity requires sustained efforts to consolidate the gains already made through legislation. The 1982-85 action programme proposes to:

- Consolidate the principle of equal treatment by strengthening individual rights. Specific measures include:
  - Better monitoring of the application of the various European directives; streamlining the complaints procedure; the abolition of protection-



*Women are regarded less and less as the only "qualified" nappy-changers and bottle-feeders. A privilege lost for women or a right won for men?*

— In February 1975, Community ministers agreed upon a European directive which put this principle of equal pay in concrete form. Since 1979, this directive has obliged Member States to adapt their laws to forbid all sex discrimination at work, particularly in the area of job descriptions. Member States must also give workers who believe this right has been transgressed the right and opportunity of redress in the courts. The directive prevents the retaliatory sacking of a worker who exercises this right.

This right of legal redress is crucial. It gives legal protection to workers in an area frequently not covered in previous national legislation. Anyone who believes their rights have been infringed can lodge a complaint in the courts or some other competent national tribunal. If a dispute arises about the interpretation of Community legislation, the case is referred to

difference in the hourly rates of part-time and full-time workers could be considered a breach of Article 119 if it was an indirect means of reducing the pay of mainly female part-time workers.

In 1979, the European Commission reported to the Council of Ministers that the "equal pay principle had not been fully respected in any Community country". This state of affairs, which still applies, led the Commission to take proceedings in the European Court against the Member States.

### Equality at work

Working conditions for women vary from one country to another. But similar problems arise to different degrees in all countries:

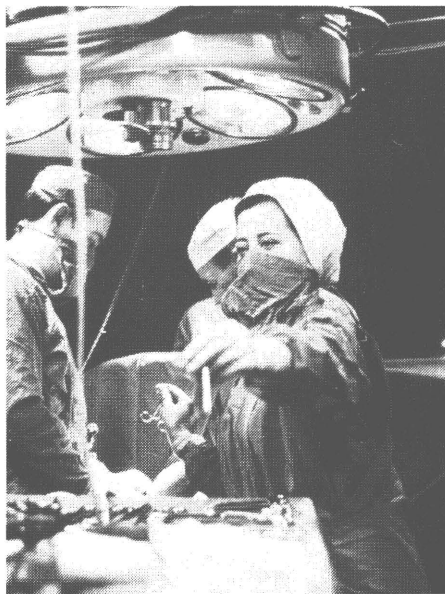
- inadequacies in career guidance and training for girls and women, who

ist measures which bar women from certain jobs and promotion opportunities.

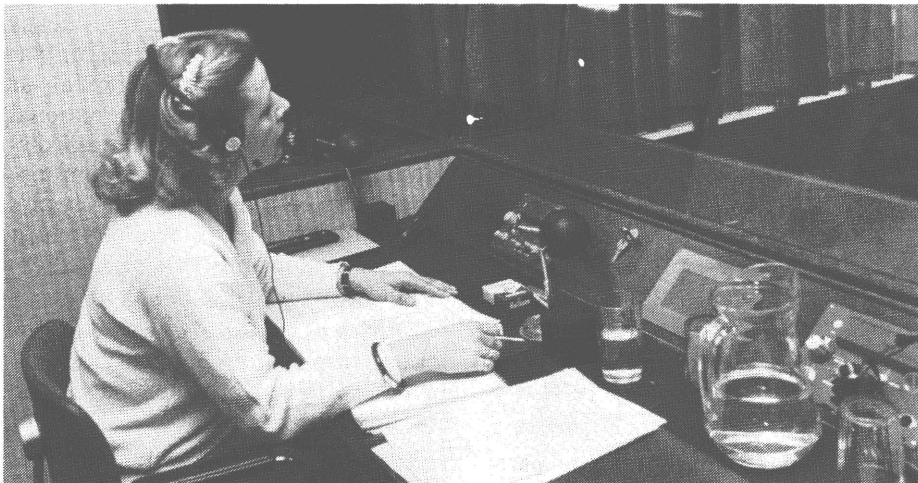
- Improvement of the occupational status of self-employed women and women employed in agriculture, especially in family businesses. The European Commission has drawn up a draft directive covering equal treatment in these areas.

- Reforms of provisions of the tax system which have a negative impact on the employment of women.

- A variety of measures concerned with the improvement of living and working conditions: increased parental and family leave (a draft directive was tabled in November 1983); extensions to the network of cooperatives and their facilities: strengthening and harmonizing measures to protect the rights of pregnant women and mothers.



*Women have yet to make a significant breakthrough into the world of medicine, particularly in specializations such as surgery or biology*



*Interpreting at conferences: a field in which equality is well established*

— To achieve equality of opportunity in concrete terms, in particular through measures to promote positive discrimination:

- Attempts to change attitudes to women at work; efforts to promote better relations between men and women at work, in the home and in society at large.

- An increased range of training opportunities for women and girls, partly through the Community programmes on vocational training and preparation for working life. A better employment mix in all jobs and industries and at all levels of seniority, taking account of the development of new occupations and technologies and their impact on job opportunities, qualification requirements and health and working conditions.

- The application of the principle of equal treatment to immigrant women.

In the face of the high level of unemployment amongst women, the European Commission has reaffirmed their right to work and to economic independence. It has suggested a series of measures, aimed especially at the worst-off cases, to promote new jobs, to encourage the employment of women, to improve their training and career guidance, to broaden understanding of grass-roots problems and to change attitudes to women at work.

### Equality at school

The range of job opportunities for women—or the lack of them—begins in the classroom. Schoolgirls are still

far too frequently the victims of prejudices which close off career opportunities which are increasingly opening to them.

The Commission memorandum of 1975 suggested the promotion of true equality of opportunity for girls and women at all stages of their lives: at school, their first job and when returning to work after bringing up a family. The 1982-85 programme concentrates on:

- informing girls and their parents and schools of the full range of available job opportunities;

- promoting a wider range of job choices and familiarity with new technologies, through career guidance, training and retraining.

The Community supports a series of pilot programmes and experiments in the exchange of information which are to be extended following resolutions adopted by education and social affairs ministers in June 1983. One of these resolutions deals with vocational training in the 1980s. It aims to promote equality of opportunity in access to jobs. In particular, it is designed to encourage more women to train for jobs in which they are traditionally seldom found. Two other resolutions were concerned with the introduction of new computer technologies into education and vocational training. They contained specific proposals to encourage more women to enter this new field of employment. The European Commission has also set up an information group whose brief is to encourage the creation in Member States of integrated education and training programmes to establish a wider job choice for women and entice them into new technology industries. Equality of opportunity for boys and girls also depends on the self-images promoted from early childhood. It is necessary to establish a view of men and women which does not confine them to predetermined roles. The European Commission has set up a study of feminine and masculine stereotypes in schoolbooks. It also helps to finance educational broadcasts on the equality of opportunity for girls and boys.

### Equality in social security

Discrimination between men and women by social security systems is still widespread. This stems from a traditional image of the family, which



sees the father as the bread-winner and the mother as the home-maker. The result is unfair treatment of women, especially those with dependants. Discrimination of this sort must be abolished:

— Article 119 of the Treaty of Rome states that “equal pay” means not only equal wages or salaries but also equality for “any other consideration, whether in cash or in kind, which the worker receives, directly or indirectly, in respect of his employment from his employer”.

— In December 1978, the Council of Ministers adopted a directive ordering the gradual application of equal treatment for men and women in social security systems. By 19 December 1984, all Member States must abolish discrimination in statutory social security schemes, covering illness, invalidity, old age, accidents at work, occupational diseases and unemployment, as well as family allowances. The directive applies to all workers, whether employees or self-employed.

— As part of its 1982-85 action programme, the European Commission tabled a draft directive in April 1983 which sought to extend these provisions to in-work social security schemes. The same risks and categories of beneficiaries were covered. The new proposals would apply to schemes operated by employers, trade-union agreements and even self-help organizations for self-employed professional people. The Commission is working on extensions to the application of the 1978 directive.

### Activities of the European Social Fund

Set up by the Treaty of Rome, the European Social Fund is the Community's major weapon against unemployment. It goes without saying that men and women have equal access to schemes financed by the Fund. But it also subsidizes training schemes aimed specifically at women. Thus, the Fund supports:

— Schemes to train women over 25 years old whose existing qualifications are lacking in some way. They benefit women who have lost their jobs as well as women who wish to return to work after giving up their careers. In 1982, 14 000 women took part in programmes of this kind with the help of aid from the Social Fund totalling



*Women factory workers demonstrate: equal pay for equal work*

ECU 26.2 million (1), compared to the ECU 7.7 million with which the schemes started in 1978. Priority is given to projects which encourage a better mix of employment in new industries and areas where women are traditionally under-represented. Second-level priority is given to victims of large-scale redundancies and women who wish to gain a more responsible job in traditionally feminine professions. To ensure that the schemes make a real contribution to problems of female employment, they must involve some sort of job-experience programme or a widening of job choice with financial assistance towards finding employment.

— Projects for women aged less than 25, for the most part unemployed, who wish to learn a new trade or enter a profession where women are seldom found. In 1982, 35 000 young women benefited from schemes of this kind. This was double the number in 1981 and the figure will continue to increase sharply. The Social Fund is to reserve 75% of its resources in future for young people because of their special vulnerability to the high levels of unemployment in Europe.

A certain amount of cash is also to be reserved for experimental projects which might serve as a model for new programmes or which help to improve the effectiveness of the selection of schemes for grant aid by public authorities.

The European Commission has set up specialized services to tackle women's problems:

(1) One ECU (European currency unit) = about £0.57, Ir. £0.73 or US \$0.80 (at exchange rates current on 10 January 1984).

— The Women's employment and equality office, within the Directorate-General for Employment, Social Affairs and Education, coordinates the activities of various Commission services in the promotion of jobs for women as well as the activities of other Community institutions such as the European Centre for the Development of Vocational Training in Berlin. The office plays a central and motivating role in Community activity on wages, social security, family policy and Social Fund grants. It runs the Community's action programmes, both in the field of women's rights and concrete assistance. It monitors and promotes the application of European directives on women's rights in the member countries. It ensures that the particular problems of working women are taken into consideration in all Community policies.

— The press and women's organizations information unit, within the Directorate-General for Information, keeps constant contact with the leaders of women's groups who are able to convey information on Community activities to the 140 million women in the EEC. The unit's activities include the organization of seminars and conferences; providing information for women's magazines; the bi-monthly publication *Women of Europe* and various special studies. *Women of Europe* is published in seven languages and provides information on those aspects of Community institutions and policies which affect women. It also covers women's rights, developments in national institutions, laws and current affairs and the activities of national and international women's organizations. ○

Colin RENFREW — *Les origines de l'Europe* (Europe's origins) — Flammarion — BFRs 988 — 324 pages — 1983

How did prehistory make its great leaps forward? In this unusual and stimulating book, Colin Renfrew suggests that it was not, as was maintained for a whole century, through the spread of ideas and influence from one or two of the major centres of civilization. The traditional view of the development of metallurgy, the growth of cities and the building of the great stone monuments of Europe has been shown to be wrong by recent progress in Carbon 14 dating and the study of trees. These new techniques have shown, dramatically, that many European monuments are in fact older than their so-called predecessors.

Colin Renfrew looks to a new interdisciplinary approach to archaeology with a view to finding out how these remarkable achievements of prehistoric Europe came about without the help of immigrants or oriental techniques. He gives examples from modern non-urban societies and speculates on the temples of Malta, the huge megaliths of Brittany and England (Stonehenge and so on).

Certain historical circumstances meant that carbon dating had led to traditional chronology being particularly detailed in Europe. This is why there have been more changes than elsewhere.

Part I of this work provides the reader with an historical outline of the two revolutions of carbon dating and its implications for the traditional framework of European anthropology. The last part looks at some of the problems with acuity, after dismissing the traditional interpretations.

This fascinating book, which is easy to read, holds almost all our assumptions about prehistoric Europe up to question. It announces the birth of a completely new style of archaeology.

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Bernard BRIGOULEIX — *Les Allemands aujourd'hui* (The Germans Today) — Editions Balland — 284 pages — FF 89 — 1983

This people that lives so close to the French nation, this partner *par excel-*

*lence* is, the author says, from many points of view a stranger. And a stranger who is labelled with clichés inherited from three wars and two occupations — but which the Germans themselves have not always been able to dissipate.

How important is their political and cultural heritage? Are they as conformist and conservative as we think? How do they organize their work and play in the town and in the country? How and for what practical and theoretical reasons have the strength of the ecological 'Greens' and the pacifist movement come about? What is the life of a Turkish emigré in Berlin and a young drug addict in Hamburg like? What is this "other" Germany? How can relations between the West Germans and their brothers separated from them in East Germany be described? How do they see Germany in the world and France in relation to Germany? Do they understand the French better than the French understand them? This book tries to answer all these questions, with attentive observations that are friendly and lacking in any complacency.

Not only is the work an attractive one and a sound commercial proposition, it has style and the gift of observation of the 35-year old author, which makes it easy to read, as well as pleasant and instructive. The race for wellbeing and success has obviously meant a vast effort and it has borne fruit, as West-German households — and who would have thought it in 1945 or even a few years after that? — are the most prosperous in the world if the latest statistics from the Institut für Wirtschafts und Gesellschaftspolitik in Bonn are to be believed.

ooo

Christian PHILIP — *Textes institutifs des Communautés Européennes* (Texts instituting the European Communities) — PUF, 108 Bvd St-Germain, 75006, Paris, France (Que sais-je? collection) — 126 pages — 1984

This little book is not ambitious. It simply sets out to introduce the European Communities, through the official texts, to as many people as possible. The author is convinced that the present problems of the construction of Europe are due, among other

things, to the absence of any pro-European movement amongst public opinion. It existed 30 years ago but, paradoxically, it seems to weaken as the Communities progress. And the Communities, in spite of direct elections to the European Parliament, appear as a soulless bureaucracy. If Europe is to be given a new lease of life, then the citizens of the Member States must first get to know the Communities better. This is what this book sets out to do.

Important texts had to be cut, of course. There was only room for extracts from the texts that were included and, in many cases, quotations had to be taken from just the EEC Treaty and not the ECSC or Euratom Treaties as well. In spite of the small print, the task was still a challenge and there may be some criticism of the results. But this type of presentation always brings this type of problem. However, we think that the book is a useful one because it describes the essential features of the Communities — not just the institutions, but what they provide, free movement, that is to say, and the policies constituting what is generally called the common market. The reader can see that, in spite of the detractors, Europe, in a certain sense, already exists.

Now we have had the second direct elections to the European Parliament, we should know the Community better and this work will help us do so. This is why the texts are arranged under the following headings — the aims of the Community, their institutions, Community law, free movement, the common policies and political union.

ooo

Jean RAUX — *Politique agricole commune et construction communautaire* (Common agricultural policy and Community construction) — Introduced by Edgard Pisani — Economica, 49, rue Héricart, 75015, Paris, France — 489 pages — Bfrs 1.122 — 1984

Has the common agricultural policy been a vector for other policies as the partisans of European integration imagined? Or has it been a victim, in the absence of other policies?

This was the basic question at the Rennes conference of university teachers and researchers from CEDECE,

## NEGOTIATIONS UPDATE <sup>(1)</sup>

The 12th meeting of the ACP-EEC plenary negotiating group was held in Brussels on 26 July before the summer recess, to take stock of the negotiations since the 4th ministerial conference in Luxembourg.

In opening the discussions, Dieter Frisch, the European negotiator, said how disappointed the Community was at only minimal progress having been made in July. "We have a lot of catching up to do in September", he said.

Ambassador Okelo, the ACP negotiator, was more optimistic. He described the considerable work that had been done in his group, meaning that, in September, the ACPs could move on to various fields (investments, least developed, landlocked and island countries, (LDLLIC), basic Articles, transfer of technology, Stabex etc) where they had not so far stated their position in texts.

However, he did recognize the fact that both sides had to make a big effort in September to keep the number of questions for the Ministers to decide on at the 9-10 October meeting down to a minimum.

### Sectoral evaluation

— **Agriculture:** Nothing new here since the last plenary session. The ACPs still reserved their position on available agricultural products and promised proposals on the Agricultural Technical Centre by the end of August.

— **Trade:** Nothing new as far as access to the market was concerned. Mr Frisch pointed out the importance of the EEC's declaration. Ambassador Adodo did not mention this point.

— **Bananas:** Agreement was in view, there being only one outstanding bone of contention.

— **Rice:** Agreement on the text *ad referendum*, but the problem of quantities is still to be settled.

— **Beef and veal:** The ACPs were waiting for the EEC's draft exchange of letters reflecting the Suva agreement.

— **Rum:** EEC waiting for the promised ACP technical document on this.

— **Development of trade and services:** The ACPs were studying the Community's suggested text (see also 'Tourism').

— **Agricultural commodities:** Agreement on the continuity mechanism in view, but the ACPs said they were still dissatisfied at "certain elements" being left out (this is probably a reference to the idea of limited agreements on commodities).

— **Stabex:** Dieter Frisch insisted that negotiators produce a joint text clearly identifying the points of agreement and disagreement. The ACP response was to promise a text by the beginning of September.

— **Mining and energy/Sysmin:** Nothing to report since early July. Further appeal from the ACP Group for the Community to agree to "genuine negotiations" on the list of products covered by Sysmin and the thresholds for transfers.

— **Industrial cooperation:** Dieter Frisch urged the ACPs to finalize as many of the industrial co-operation texts as possible, particularly those connected with industry, where few basic problems remained. The ACPs said that a draft text was imminent. They were also preparing another on the transfer of technology.

— **Fisheries:** Informal contact was being made with a view to reconciling what were so far rather different points of view.

— **Tourism:** No problems of sub-

stance here, although the ACPs were insisting that there be a text on tourism as distinct from the development of trade and services.

— **Financial and technical co-operation:** The only outstanding questions were those to do with programming and the EIB (and, of course, the volume of aid).

— **Rules of origin:** The Community will be distributing a draft text of the Convention setting out its offers as far as the rules of origin are concerned (derogation and the simplification of certain rules). The ACPs still hope it will be possible for the Community to go further than the present offer.

— **LDLLIC:** Dieter Frisch suggested that the part of the Convention on the least-developed, landlocked and island countries should do no more than identify and refer to the specific proposals for these countries in each of the basic chapters.

The ACP Group had not yet given any opinion on this.

— **Cultural co-operation:** The question of the return of cultural goods was still open.

— **Regional co-operation:** No change since Luxembourg.

— **Institutions:** Two points — interpretation and arbitration procedures and consultations — still outstanding.

— **Investments:** A first exchange of views to be held in September.

— **Basic Articles:** The ACPs were preparing a counter-proposal to be communicated to the EEC in early September. They were also reflecting on the structure and duration of the Convention.

— **Lomé III:** This is to be signed in December. After the 12th plenary session, Dieter Frisch and Ambassador Okelo held a press conference when the Chairman of the ACP Committee of Ambassadors said that the Togolese Government had suggested that the signing ceremonies take place in Lomé between 7 and 11 December. ◦

(1) From the Commission's Task Force on the Negotiations.

# THE CONVENTION AT WORK

## EDF

Following favourable opinion delivered by the EDF Committee (191th meeting of 19 June and 192nd meeting of 9 and 10 July), the Commission has approved the following projects:

### All countries of Tropical Africa

**Programme to improve soya strains and cowpea**  
Fifth EDF  
Grant: ECU 2 660 000

The project is the second part of a programme to improve rice, maize, cowpea and soya strains and will last two years. The first phase was carried out from 1981 to 1983.

The primary objective of the project is to assist the International Institute for Tropical Agriculture (IITA) and indigenous research bodies in 21 African countries south of the Sahara in carrying out multilocational trials to identify improved strains of rice, maize, cowpea and soya adapted to the varied ecological conditions in these countries. It will, in addition, contribute to building up the agricultural research capabilities of the research bodies in question and improving the exchange of information and experience between them.

### Member States of the OCAM —

**Benin, Burkina Faso, Central African Republic, Ivory Coast, Mauritius, Niger, Rwanda, Senegal, Seychelles and Togo**

**Inter-State Scientific School of Veterinary Medicine, Dakar**  
Fifth EDF  
Grant: ECU 455 000

The purpose of this project is to build and equip a third residential block of 48 rooms for the Inter-State Scientific School of Veterinary Medicine (EISMV) in Dakar, and to convert the ground floor of another building for living-in students (the other floors of which are also used for accommodation) so as to provide another 16 rooms.

### Cape Verde

**Improvements to Sal airport**  
Fifth EDF  
Grant: ECU 6 210 000

The purpose of the project is to modernize, enlarge and supply equipment for Sal international airport in Cape Verde. The bulk of the work consists of upgrading the domestic and international passenger halls and lounges and the airport's various service roads and connections. The equipment will be used to improve air traffic, radio-navigational aids, fire-fighting and rescue services, aircraft and baggage handling, security controls and passengers' meals.

### Chad

**Consolidation of Sahr-Léré road works**  
Fifth EDF  
Grant: ECU 2 700 000

This project concerns rehabilitation and maintenance works to complement the works under way on the 630 km of dirt road between Sahr and Léré (frontier with Cameroon), undertaken as part of the fourth EDF's priorities programme (approved at the 164th meeting of the EDF Committee in February 1982). The aim of the project is to re-establish a permanent transport link in the south of the country, open up an economically important region and significantly reduce transport costs and travelling time on the major East-West highway.

### Ghana

**Assistance to Ghana Stone Quarry and KAS Products Ltd.**  
Fifth EDF  
Grant: ECU 1 670 000

The project concerns the provision of equipment and spare parts to two stone quarries to enable them to expand output to meet the unsatisfied demand for stone chippings. The two quarries are Ghana Stone Quarry, located near Accra, and KAS Products Ltd., located in the Ashanti Region.

**Line of credit to the Agricultural Development Bank**  
Fifth EDF  
Grant: ECU 6 000 000

It is proposed to make available a

## Also in the yellow pages

I. Negotiations update

### The Convention at work

II. EDF financing

VI. EIB

VII. ACP embassies

VIII. Customs co-operation

### General Information

IX. Conference on refugees

IX. Perez de Cuellar visits Brussels

XI. Aid to non-associated countries

### European Community

XIII. Pierre Pflimlin, President of the EP

XV. Jacques Delors, next President of the Commission

Line of Credit to the Agricultural Development Bank (ADB) which is the major development bank in Ghana for the agricultural and fisheries sector. This line of credit will be utilized for the purchase of essential fisheries inputs in the form of marine engine spare parts and fishing gear plus the provision of technical assistance to strengthen the Bank's operations.

The aim of the project will be to rehabilitate up to 300 vessels in the inshore fishing fleet which are capable of exploiting the presently underutilized demersal (bottom feeding) fish stocks. Another 1 800 fishermen will be provided with nets.

### Cameroon

**Development of irrigated crops in Logone and Chari district**  
Fifth EDF  
Grant: ECU 8 970 000

The project constitutes the follow-up to operations financed jointly since 1978 by the European Community and the Republic of Cameroon in the district of Logone and Chari in order to make up this region's food shortfall, which at the outset was between 15 000 t and 20 000 t of cereals a year.

The main objective of this project (Stage II) is to establish an irrigated area of 800 ha, for the growing of cereals and market-garden produce, in addition to the 800 ha already established (540 ha in Stage I and 260 ha in the interim stage). Production is ex-

pected to amount to some 8 475 t (6 500 t of paddy and 1 975 t of other cereals and market garden produce). With the 6 500 t of paddy which can be produced on the existing areas (4 000 t on the areas established in Stage I and 2 500 t on the areas established in the interim stage), the district will almost attain self-sufficiency in food. By adding to the hydro-agricultural measures in the strict sense of the term sections dealing with "roads", "health", "functional literacy programmes-training-motivation", "research", and "livestock farming", the project will help towards the implementation of priority rural operations for this region.

## Comoros

### Development of the Jimilimé area

Fifth EDF

Grant: ECU 1 482 000

The project accords with the Government's policy of increasing food self-sufficiency by instructing farmers in ways of combating erosion and in farming methods suited to their specific situation. A total of nearly 6 000 persons will be affected by the project.

Principal resources to be deployed:

- improvement of tracks and construction of a base
- supply of transport, topographical equipment, tools, furniture and sundry equipment
- provision of an agricultural expert and local extension staff.

## Djibouti and Ethiopia

### Ethiopian-Djibouti Railway (Phase II)

Fifth EDF

Grant: ECU 10 000 000

Special Loan: ECU 5 000 000

The aim of the project is to continue the ongoing effort to upgrade the services of the Compagnie de Chemin de Fer Djibouti-Ethiopien (CFDE) which runs between Addis Ababa and Djibouti (781 km).

The CFDE has previously received a grant of ECU 10 million under Lomé I for Phase I of the project. Implementation of Phase I is progressing on schedule and is expected to be completed during the first half of 1984. During 1983, the railway received a credit from the Government of France of FF 90 million.

The major components of Phase II are:

- renewal of 60 km of track
- purchase of 60 new freight wagons
- purchase of workshop and track maintenance equipment
- provision of technical assistance.

## Fiji

### Logging training school

Fifth EDF

Grant: ECU 400 000

The Forestry Training Centre at Lololo, which was established in 1969, presently conducts training of forest technicians. In this training the emphasis is on silviculture and forest management. As harvesting increases training needs of the Forestry sector changes, both in terms of contents and clientele. Training in logging which is at the moment non-existent, will become a priority area.

The planned Logging Training School will operate in conjunction with the existing Forestry Training Centre and will offer training both for forest technicians and for loggers (operators) within all aspects of logging in Fiji—i.e., felling, trimming, cross-cutting to length, extracting (skidding) and loading. The number of trainees will be approximately 90 per year.

## All ACP States

### Assistance to ACP-EEC business organizations set up to improve production and the marketing of products on external markets

Fifth EDF

Grant: ECU 3 103 250

The purpose of the project, which is in accordance with Article 135 of the second Lomé Convention, is to provide assistance for COLEACP, the Liaison Committee for tropical fruits and out-of-season vegetables originating in the ACP countries. Without such assistance, COLEACP cannot meet requests for support from ACP organizations and firms anxious to improve the way in which their fruit, vegetable and horticultural production is marketed abroad.

Noting that ACP businessmen cannot achieve their final aim unless a whole set of pre-sale operations are conducted, COLEACP has drawn up a programme for these extending over three years and covering:

- sales promotion;
- information for producers;
- business training;

- organization and expansion of technical and trade contacts;
- technical assistance.

## Mauritania

### Borehole equipment

Fifth EDF

Grant: ECU 943 000

The purpose of this project is to provide water supply for a population whose income is extremely low and which has been severely affected by the prevailing drought in the Sahel region. The aim will be to improve or rehabilitate existing fresh water boreholes which, either for lack of equipment or lack of use, have failed to be maintained over period of time.

### Equipment for Nouakchott Wharf

Fifth EDF

Special loan: ECU 1 600 000

The purpose of the project is to maintain Nouakchott Wharf by carrying out overhaul and repair work and by purchasing equipment and replacement parts. It will allow the wharf, which was financed by the first, second and third EDFs and by an EIB loan, to remain operational. The project will ensure the continued viability of Nouakchott's only existing port facilities pending the entry into service of the deep-water port which has been under construction since 1979; indeed, even after the completion of the deep-water port, scheduled for 1987 at the earliest, the wharf will continue to perform an essential function.

## Senegal

### Rebuilding of the Gueule Tapée canal

Fifth EDF

Special loan: ECU 6 000 000

The purpose of this project is to provide drainage in Dakar for the working-class districts of Médina and Soumbédioune by rebuilding a canal to carry off rainwater (the Gueule Tapée canal) and constructing two longitudinal collectors for waste water.

This project is the second phase of the scheme for waste water drainage in the Bay of Soumbédioune, the first phase of which was the subject of a fourth EDF financing operation.

## Mali

### Sélingué-Kalana high-voltage line

Fifth EDF

Grant: ECU 3 200 000

The Malian authorities have de-

cided to give priority to gold mining operations at Kalana, in the south-west of the country, some 100 km to the south of the Sélingué hydro-electric power plant.

For the mine's power supply, it has now been decided that the solution of linking it to the Sélingué plant is preferable to that of providing it with its own diesel-driven generators.

Financing from other sources will be used for constructing the transmission line between the power plant and the mine, but the transformer sub-stations at either end of the line will not be included.

The purpose of this project is to supply the equipment for and install these transformer sub-stations.

## Guinea Bissau

### Reconditioning of three self-propelled ferries

Fourth EDF

Grant: ECU 390 000

The aim of this project is to:

— Supply the engines, mechanical parts and miscellaneous equipment needed to recondition the three self-propelled ferries at João Landim, S. Vincente and Farim, financed under the fourth EDF;

— provide further training for those who operate and maintain these ferries.

## Guinea

### Renovation of Ignace Deen Hospital, Conakry

Fifth EDF

Grant: ECU 5 000 000

The purpose of this project is to rehabilitate certain existing buildings, construct new premises and supply equipment for the Ignace Deen Hospital in Conakry.

It involves renovating a complex of some 500 beds, which entered into service in 1907 and is now in such a state of decay that it can no longer properly fulfil its role of University Hospital Centre (UHC) or of referral hospital for cases from both the capital and the country as a whole.

### Sanoyah textile mill

Fifth EDF

Grant: ECU 8 500 000

The purpose of this project is to implement measures to make the Sanoyah textile mill, financed under the fourth EDF, fully operational.

The purpose is to:

— supply adequate power for running the mill by installing auxiliary electricity generating sets;

— ensure, while the sets are being installed, that the mill continues operating at a reduced level;

— supply the necessary technical assistance during the stepping-up and stabilization of production in order to show that the mill is a reliable production unit sufficiently attractive to bring in European partners for the setting-up of a joint venture with the state-owned Guinean company.

## Gabon

### Bokoue reforestation

Fifth EDF

Special loan: ECU 2 780 000

The project provides for the reforestation of 600 hectares near the village of Ekouk, about 150 km south-east of Libreville, with the following species: gaboon (150 hectares), idigbo (250 hectares), opepe and afara (200 hectares). This project should make it possible to establish a definitive policy on methods and techniques of large-scale reforestation in Gabon, specifying which methods to adopt in reactivating all the reforestation teams, improving techniques, and increasing yields and the variety of species. The present project forms part of a ten-year programme for the reforestation of 4 000 additional hectares at a rate of 500 hectares per year when the programme is in full swing.

## Somalia

### Development of oases in Northern Somalia

Fifth EDF

Grant: ECU 2 300 000

The project area is situated in the north-eastern part of the country, a hot, dry area which remains largely undeveloped. The major economic activities there are nomadic livestock production and cultivation of date palms and associated cultures in small oases. There is an ongoing date palm development project in the area, which has received French bilateral assistance since 1980.

The major objective of the proposed project, which would run for four years (1984/85-1987/88) is to develop smallholder farming in the oases areas and this will involve both assistance to existing private growers and the taking over of the ongoing project. State farm areas, developed under the latter, will

be distributed to private farmers. The project will be involved principally in the upgrading of irrigation systems, rehabilitation of date palm groves, the introduction of productive secondary crops, the development of livestock and handicrafts and the provision of tools, equipment and extension services.

## African ACP States

### Statistical Training Programme for Africa (STOA)

Fifth EDF

Grant: ECU 925 000

The purpose of this project is to give the African ACP countries an initial contribution, covering the period 1984-1987, to their programme designed to make them autonomous in the field of statistics (training and staff) over the next decade.

This contribution will take the form of various means of support for a number of regionally-based training centres participating in the STPA.

To ensure a high standard of training and a rational deployment of statisticians in Africa, it is proposed to finance a certain number of operations which can be summarized as follows:

— technical assistance for the preparation of teaching programmes, research and recruitment examination;

— study trips

— seminars and in-service training (introduction to computers, refresher courses, meetings between statisticians and users)

— supply of teaching materials and also

— preparations for the transfer of the European Centre for the Training of Statisticians and Economists from the Developing Countries (CESD) to the Abidjan (Ivory Coast) and Yaoundé (Cameroon) centres.

## Mauritius

### Multinational Training Programme

Fifth EDF

Grant: ECU 1 100 000

The project will fund a training programme for Mauritius. The present proposal is an essential part of the vocational education strategy of the Mauritian authorities who wish to improve the skills of particular categories of the employed and to reduce unemployment by better matching the skills of the jobless to employment needs.

In this context, the programme will support the Central Training Office

(CTO), which is responsible for professional training, and will include particular training courses for target groups.

It will provide for:

- training in technical and vocational fields through the CTO;
- training courses and seminars for development officers and the unemployed;
- training facilities for Rodriguans;
- specialized training abroad.

## **Sudan**

### **Jebel Marra Rural Development Project (interim phase)**

Fifth EDF

Grant: ECU 2 500 000

The objective of the Interim Phase of the Jebel Marra Rural Development Project is to consolidate the sound progress the Project has achieved during the first four-year phase and to prepare for future development. The project is concerned with raising agricultural production through effective agricultural extension and improvement of rural roads. The Interim Phase covers the period from July 1984 to June 1986.

During the Interim Phase emphasis will be placed on building up the extension service supported by a comprehensive adaptive research programme, agricultural input supply and credit. Forestry will concentrate on village woodlots and the community development programme will be maintained. Opportunity will be taken to define the role the project should take regarding livestock production. A further 390 km of rural roads will be rebuilt and up-graded and replacement road plant will be required. Monitoring and evaluation will place emphasis on monitoring project implementation and on providing the data necessary for the 1985 project review. A technical assistance team will continue to support the project management.

## **Kenya**

### **Machakos Integrated Development Programme (Phase II)**

Fifth EDF

Grant: ECU 15 200 000

The Machakos Integrated Development Programme (MIDP) is a long term project in one of Kenya's largest and most heavily settled districts, with particular focus on water, agriculture and socio-economic development. Machakos stands for 14 000 km<sup>2</sup> of

semi arid land being the home and resource for survival of 1.2 million people who will pass the 2 million-mark by the end of this century. MIDB combines a concern for the development of Kenya's semi-arid areas with a district-focused approach to planning and implementation. Phase I began in 1978 and the present dossier covers a second phase of three years. The project's primary aim is to raise people's living standards in ways that can be sustained, against a background of rapid population growth and increasing pressure on fragile resources in a risky agricultural environment.

## **Burundi**

### **Bujumbura-Muzinda road**

Third and Fourth EDF

Grant: ECU 5 100 000

The project consists of improving and asphaltting the Bujumbura-Muzinda road (13.52 km), the first section of RIG 9 (Bujumbura-Bubanza).

The section in question links the important Muzinda market to the capital and is one of the main routes for transporting agricultural produce from the Imbo-Sud area.

## **Botswana, Lesotho, Malawi, Swaziland**

### **Post and Telecommunications Training scheme**

Fifth EDF

Grant: ECU 1 200 000

The aim of the project is to improve the Postal and Telecommunications services of Botswana, Lesotho, Malawi and Swaziland (BLMS) through the development of their training institutions. To further this aim five technical assistants will be made available for a period of 2 years each (1 instructor each to the national training centres of Botswana, Lesotho, Swaziland and 1 instructor and a project coordinator to the Multi-Country Training Centre located in Blantyre, Malawi). Complementary training equipment will be provided to the four training centres and an extension to the national training centre in Swaziland.

## **Grenada**

### **Rehabilitation of the nutmeg station in Grenville**

Fifth EDF

Grant: ECU 43 211

The project involves the re-roofing of the nutmeg station in Grenville.

## **Papua New Guinea**

### **Wedau to Karagatu road**

Fifth EDF

Grant: ECU 1 200 000

The project provides for the rehabilitation of 22.5 km of rural road and the construction of 14.5 km of road of four-wheel-drive standard between the villages of Wedau and Karagatu in the Milne Bay Province.

## **French Polynesia**

### **Forestry programme in the Marquesas Islands and the leeward group of the Society Islands**

Fourth and Fifth EDF

Grant: ECU 511 000

Special loan: ECU 808 000

The aim of the project is to plant an area of 600 ha with Caribbean pines on the islands of Nuku Hiva and Hiva Oa in the Marquesas Islands, and on Raiatea and Tahaa in the leeward group of the Society Islands, in French Polynesia. The project forms part of French Polynesia's forestry programme, the long-term objective of which is to plant a 11 250 ha in order to make the territory self-sufficient in general quality timber. This project is the follow-up to the successful afforestation project on the Marquesas Islands financed from the fourth EDF.

## **Jamaica**

### **Scientific Research Council**

Fifth EDF

Grant: ECU 650 000

The purpose of this project is to improve and expand the range of equipment in the Scientific Research Council, thereby enabling the SRC to meet its mandate to provide scientific services to Jamaican industry.

The project has the following components:

- supply of equipment for SRC's laboratories and workshops
- short-term technical assistance for organization and management
- training for establishment of repairs and maintenance workshop.

## **Gambia-Senegal**

### **Research on N'Dama production**

Fifth EDF

Grant: ECU 2 500 000

The purpose of this project is to pursue applied research on the pro-

duction of N'Dama taurus cattle under traditional livestock farming conditions in Gambia and southern Senegal. The research is aimed at determining the influence of different levels of trypanosome risk, and of health, nutritional and rearing conditions on production of this type of cattle.

## **Lesotho**

**Maseru International Airport**  
Fourth EDF  
Special loan: ECU 300 000

This project consists of the provision of navigational aids, meteorological equipment, communication systems and the control tower cab, complete with instrumentation, at the Maseru International Airport, now under construction at a site adjacent to the highway to Mafeteng, near Maseru. o

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## **EIB**

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### **Central Africa: loans for hydro-electric scheme**

The European Investment Bank, the European Community's bank for long-term finance, announces three loans under the second Lomé Convention, each for ECU 2 million, for part-funding construction of a hydro-electric power station of regional benefit on the Ruzizi River.

The plant, with an initial capacity of 26.6 MW, will serve to meet the upturn in electricity demand in Burundi, Rwanda and Zaïre.

The project, scheduled for commissioning by the end of 1987, involves installing two 13.3 MW turbo-alternator sets, a 15 km-long, 110 kV power line plus ancillary equipment. A third turbo-alternator set may be added at a later stage. A 28.2 MW hydro-electric power station, 25 km upstream from this latest project, has already been built on the Ruzizi River which, at the project site, forms the border between Zaïre and Rwanda.

The funds, drawn from risk capital resources provided for under the Convention and managed by the Bank, have been made available for up to 25 years at 2% in the form of conditional loans to each of the three states concerned for financing part of their stakes in the share capital of Société Internationale de l'Electricité des Pays des Grands Lacs (SINELAC), estab-

lished in February 1984 to operate the project.

The Commission of the European Communities (European Development Fund), the International Development Association (IDA), Italy and the Banque de Développement des Etats des Grands Lacs are also financing the new power plant and dam.

## **Aruba**

To assist economic development in Aruba, one of the Netherlands Antilles, the European Investment Bank has provided the equivalent of ECU 800 000 to the Government of the Island Territory of Aruba to finance an increase in the share capital of the Banco Arubano di Desaroyo N.V. (BAD). The BAD, a government-owned institution, was established in 1982 to promote the balanced economic development of the island by providing finance for agriculture, fisheries, industry, agro-industry, transportation and tourism.

The funds are drawn from risk capital resources and will be made available in the form of a conditional loan. The loan is for a period of up to 25 years at a 3% rate of interest. This is the second such loan granted by the EIB in the Netherlands Antilles. In 1982, the European Investment Bank provided ECU 840 000 to the Central Government of the Netherlands Antilles to bolster the capital of the Curaçao-based Development Bank of the Netherlands Antilles (OBNA).

On 1 January 1986, Aruba will be granted a "status aparte", a separate status in the Netherlands Antilles and the Kingdom of the Netherlands. For this reason Aruba did not become a shareholder of the Development Bank of the Netherlands Antilles for which the earlier loan was provided, but established its own development bank.

### **Benin: loan for developing an oil field**

The People's Republic of Benin has since 1981 been developing the Sémé oil field 15 km off its coast; in order to determine the extent of the field and increase the recovery rate, further investment is to be carried out with the financial assistance of the European Investment Bank which is lending a total of ECU 18 million under the Second Lomé Convention.

The EIB's financing will go to the state for a term of 10 years and comprises:

— a loan for 13.5 ECU million at a rate of 10.7%, from the EIB's own resources, carrying the guarantee of the Fonds d'Entraide et de Garantie des Emprunts du Conseil de l'Entente;  
— a conditional loan for ECU 4.5 million (at an initial rate of 1%) from risk capital resources.

The loan from the EIB's own resources will help finance the drilling of five wells and the installation of production equipment between now and the end of 1986; the conditional loan will go especially to finance the drilling of two exploration wells to determine more precisely the extent of the field and of the recoverable reserves. The total oil recovered will provide Benin with significant budgetary revenue.

The International Development Association (IDA) of the World Bank group is also contributing towards financing this project; the EIB in 1982 granted the State a conditional loan ECU 350 000 from risk capital for a geological survey of the Sémé oil field.

### **St.-Vincent and the Grenadines: loan for hydro-electric scheme**

With a view to boosting electricity generation while at the same time reducing imports of oil, the Government of St.-Vincent and the Grenadines has decided on the basis of feasibility studies to develop a hydro-electric scheme on the river Cumberland in the western part of St.-Vincent. As part of financing envisaged under the Second Lomé Convention, the European Investment Bank is providing ECU 2.9 million (approx. 6.7 million East Caribbean dollars) towards this project.

Its financing takes the form of a conditional loan granted to the state for 20 years at a rate of 2% and will be drawn from risk capital resources. The state will make the proceeds available to the St.-Vincent Electricity Services Ltd. (VINLEC), all of whose shares are held by the state and the Commonwealth Development Corporation (United Kingdom).

VINLEC is responsible for electricity and distribution in St.-Vincent and plans to construct three separate power stations with a combined capacity of 3 370 kW on the Cumberland, together with a water collection system, and to connect the power stations to the island's supply system. At present the demand for electricity is met by two hydro-electric power sta-



tions (1 200 kW) and two diesel generating units (5 400 kW). The new stations should be completed towards mid-1989 and will help to meet the rapid growth in demand without increasing oil consumption.

The Caribbean Development Bank, the International Development Agency (World Bank Group), USAID and the Canadian International Development Authority are also contributing towards financing this hydro-electric scheme. ◦

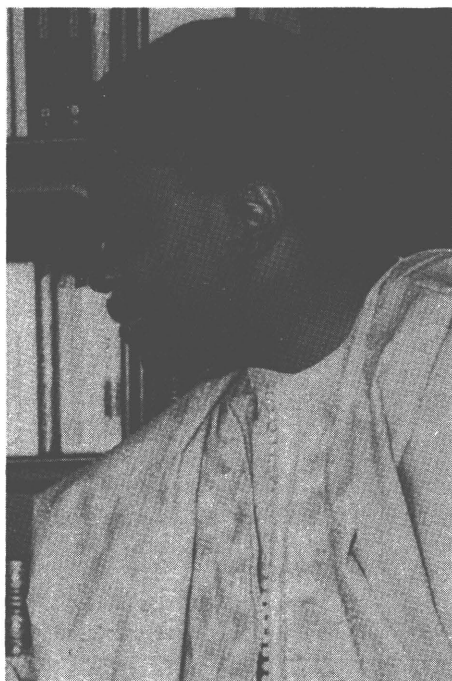
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## ACP EMBASSIES

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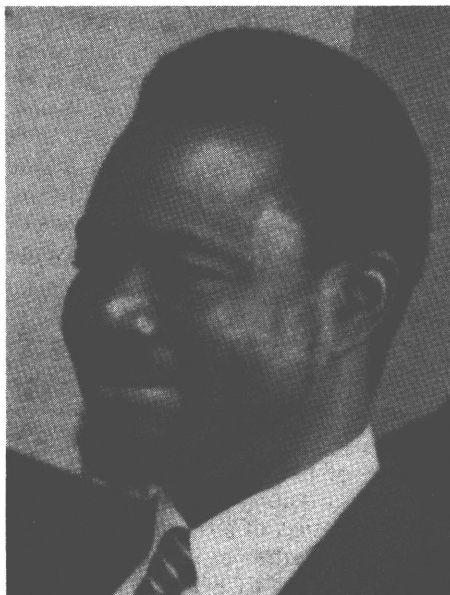
The new Ambassadors of Burkina Faso (until recently Upper Volta), Chad and Zaïre have just presented their credentials to the Presidents of the Council and the Commission of the European Communities.

### Burkina Faso



Amadé Ouédraogo is back as Ambassador in the ACP-EEC circles he got to know when he was First Counsellor at Upper Volta's embassy in Brussels from 1975-81. Mr Ouédraogo, who holds an arts degree and a diploma in international relations, has worked in the international co-operation division of his country's Foreign Relations Ministry and, after his last stint in Brussels, went to Paris and then Copenhagen as First Counsellor and then back to the Paris representation as temporary chargé d'affaires. A father of three, Amadé Ouédraogo is 38.

### Chad



Mbailaou Lossimian Naimbaye, Chad's new Ambassador, has considerable governmental experience, having held a number of ministries, including Agriculture and Animal Production, Public Works, Mining and Geology and Rural Development over the periods 1966-73 and 1975-82. Brussels is not the first diplomatic post to be held by this specialist in livestock questions, as he has already represented his country in The Sudan, China, Algeria and Tunisia. Mr Naimbaye, a family man—he has seven children—is 44.

### Zaïre

Tschibwabwa Ashila Pashi, 46-year old law graduate and father of 14, is Zaïre's new Ambassador to Brussels. He was once a lawyer at the Court of Appeal in Kinshasa and he has held a number of top posts in government



(including that of cabinet secretary at the Ministry of Justice and at the Ministry of Youth Affairs and Sport) and the Party (member of the central committee of the People's Revolutionary Movement and then Deputy Executive Director and Secretary-General for Mobilization, Propaganda and Political Animation). Mr Pashi replaces Bomboko Lokumba Is'elenge. ◦

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## EMERGENCY AID

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### Guinea

In the aftermath of the events that took place in Guinea and which favour a massive return of refugees, and as a response to the appeal launched by the United Nations High Commission for Refugees, the Commission has decided to grant Guinea emergency aid worth ECU 500 000 under article 137 of Lomé II.

This aid will be channelled through the UNHCR and is destined to provide some 100 000 of the most needy refugees with basic goods.

### Kenya

The Commission has decided to provide 10 000 tonnes of cereals as emergency food aid to Kenya.

The present severe drought has brought famine to 16 of the country's 42 provinces. The emergency aid will meet the needs of about 220 000 people for three months. It is estimated that the aid will cost ECU 1 600 000.

### Mali

Exceptional aid worth ECU 1 500 000 has been granted under Article 137 of the Second Lomé Convention to drought victims in several areas of the country. The amount agreed upon will be used to purchase foodstuffs and seeds locally and to transport them into the affected areas.

During the first six months of 1984, the Commission took decisions under the Second Lomé Convention to award exceptional aid totalling ECU 21 510 000, of which ECU 21 million ECU went to drought-stricken African countries.

For non-ACP countries, 11 operations to the value of ECU 5 200 000 were agreed, ECU 3 600 000 having been earmarked for Mozambique, where drought victims are being assisted by a Community aid team.

## Madagascar

The Commission has decided to grant emergency aid worth ECU 170 000 to Madagascar to help the population after the damage caused by Cyclone Kamisy. ○

## SYSMIN

### Guyana's demand for its bauxite sector

Guyana has applied for Sysmin aid to cover a project for the re-establishment of the bauxite sector.

Bauxite production capacity in Guyana was affected by serious but temporary disruptions in 1982 and 1983, which were largely beyond the country's control. Production was viable until the beginning of 1981, and this viability can be restored if Guyana takes the appropriate action, which it has started to do. Exports of bauxite, notably to the Community, represent about 45% of Guyana's total exports.

In 1982 and 1983, Guyana's earnings from exports of the product were 28% and 45% respectively, below the 1978-81 average. The drop in cash flow has pushed the industry into the red and made it impossible to go ahead with spending on the maintenance and replacement of equipment.

In the light of all these factors, which fulfil the requirements of the Lomé Convention for the grant of aid under Sysmin, the Commission has decided that Guyana's application is admissible.

The Commission is, furthermore, about to decide on an advance for an initial operation to provide for the most urgent needs in order to maintain the present level of production and, in particular, to bring stocks of spare parts for the current year back to normal. ○

## BOTSWANA

### Measures for beef and veal

The European Commission has eased health protection measures concerning beef and veal from Botswana, having confirmed that the situation with regard to foot-and-mouth disease continues to improve: no outbreak has occurred since September 1980. However, vaccination continues to be practised in the north-western regions of the country (where there is a risk of infection due to wildlife) and in areas contiguous with Zimbabwe. ○

Bearing in mind this situation, the Commission has extended the approved area from where imports of fresh meat are authorized; this meat must come from bovine animals which have spent the previous twelve months in the non-vaccinated area and have not been vaccinated in the previous twelve months. In addition, the Commission is allowing imports of a limited range of offals from the same areas. ○

## FOOD AID

Having received the favourable opinion of the Food Aid Committee, the Commission has decided on a third allocation of aid, under the 1984 programme, the estimated cost of which amounts to ECU 70.6 million. This allocation will go to the countries in the table below:

Country or organization	Quantity (t)			
	Cereals	Milk powder	Butteroil	Other products
Guinea-Bissau	7 000	100	125	—
Guinea	7 000	—	—	—
Sao Tomé and Príncipe	1 000	—	—	100 vegetable oil
Ethiopia	—	1 400	500	—
Djibouti	4 000	100	—	—
Madagascar	20 000	400	—	—
Botswana	4 000	480	—	—
Lesotho	7 000	200	—	—
Morocco	10 000	—	300	—
UNRWA	—	1 850	1 000	500 sugar 30 olive oil 200 beans 1 552 various
Bolivia	10 000	1 000	200	800 vegetable oil 1 000 beans
Indonesia	—	1 200	200	—
Bangladesh	130 000	—	1 500	700 vegetable oil
Jamaica	—	960	160	100 vegetable oil
	200 000	7 690	3 985	

The estimated cost to the Community budget of this third 1984 instalment of food aid is ECU 70.6 m. ○

## CUSTOMS COOPERATION

### Derogation from the rules of origin for Jamaica...

A request for a derogation from the

rules of origin for carpets manufactured in Jamaica has been presented by the ACP States on behalf of the Jamaican Government. Exports to the Community cannot be defined as originating products within the meaning of the Second Lomé Convention since backing imported from third countries is used in the manufacture of the carpets.

In view of the fact that the jute backing is imported from another developing country, namely Bangladesh, the Commission has decided to submit to the ACP-EEC Customs Cooperation Committee a draft decision for a derogation, as provided for in the rules of origin annexed to the Lomé Convention. This decision would allow Jamaica to export to the EEC 80 000 square yards of tufted carpet free of customs duty until 28 February 1985, the date on which the Second Lomé Convention expires.

### ... and for Mauritius

The European Commission has also proposed that Mauritius should again benefit from exemption to the rules of origin of the Lomé Convention, for its canned tuna fish. The exemption emanates from the fact that these preserves, in certain limited quantities, can enter the EEC with customs franchise privilege, even if the tuna has been caught by fishermen from non-Community countries. The current exemption expires on 31 July: the Com-

mission proposes that from 1 August until the Lomé II Convention expires the exemption be extended for a quantity of 600 tonnes.

Mauritius has a tuna fish canning factory, but has serious difficulties in supplying it with tuna fish from the ACP or EEC countries, that is to say, caught by boats from Mauritius itself, or by boats from other ACP countries or by boats from Member States of the EEC. Since 1979, Mauritius has had one boat ("Lady Sushil"), the catches from which cover more than half the requirements of the canning factory. The rest of the tuna is imported, usually from the Maldive Islands. The 1983 figures were as follows: catches of the "Lady Sushil", 3 000 tonnes; requirements of the canning factory to maintain its profitability threshold, 4 500 tonnes. The other ACP States are not in a position to provide this

tonnage; the EEC has fishing rights in the Seychelles but the marketing channels do not go towards Mauritius. The Maldive Islands have considerably reduced their catches.

To guarantee that the canning factory works well, Mauritius must still take part of its supplies from outside the EEC and the ACP for a certain period (and even from outside the Maldive Islands), and yet sell canned tuna fish in the EEC without paying customs duty; the purchase of a second boat is, however, planned. The Commission therefore proposes to grant a final exemption under Lomé II.

If the EEC Council accepts the Commission's proposal, this will represent the Community position in an imminent discussion of the ACP-EEC Customs Co-operation Committee, which will make the final decision. ○

including these ideas and outlining a strategy for the future was a considerable achievement.

The response of donors to the projects presented to the Conference was varied. Some pledged finance for specific projects; others made expressions of interest in projects; many, including Member States, stressed that they could not commit themselves at this stage. The assessment of UNHCR at the end of the Conference was that finance had been secured for about a third of the long-term development projects and expressions of interest had been made concerning a number of the remaining projects. In a statement at the end of the Conference the African countries declared that they were satisfied with the result. Contrary to expectations, finance for the additional UNHCR projects was limited.

The Community was represented by the President in office of the Council of Ministers, Irish Development Minister O'Keefe, and by the Commission, Deputy Director-General for Development Maurice Foley. In his speech, Mr O'Keefe expressed his conviction that the new ACP-EEC Convention would provide the means to meet the refugees' long-term needs even more effectively than in the past. Mr Foley, for the Commission, outlined the aid which the Community has given in the past (\$ 150 million in the form of food aid and emergency aid to refugees in Africa since 1980). He stressed the Community's desire to help in the finding of long-term solutions.

This could be done by co-financing with NGOs, by projects under the non-associated programme and, for the ACP countries, through projects under national indicative programmes, and under regional co-operation. It was up to the ACP States concerned to include such projects among their own development priorities. ○

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## GENERAL INFORMATION

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### Second International Conference on Assistance to Refugees in Africa

The Second International Conference on Assistance to Refugees in Africa (ICARA II) was held in Geneva from 9-11 July, 1984. The aim of the Conference, held three years after ICARA I, was to launch an effective long-term strategy capable of resolving the dramatic problems faced by Africa's four million refugees. The main theme of the Conference was "Time for solutions", reflecting both the pressing nature of the problem and the need to go beyond short-term emergency assistance.

In preparation for the Conference a UN technical team visited 14 African countries and identified 128 long-term development projects for a total value of \$ 362 m aimed at reinforcing the infrastructure of the zones of those countries most seriously affected by the arrival of refugees or returnees. These projects, as well as short- and medium-term projects to be carried out by the UNHCR, were presented to the Conference. A final declaration and programme of action, outlining a strategy for the future was also submitted for approval. Most of the countries and principal organizations of the UN system were represented, with the notable exception of the Eastern bloc countries, at the Conference which was opened by the UN Secretary-Gen-

eral Perez de Cuellar, and chaired by the Belgian Foreign Minister Mr Leo Tindemans, unanimously elected President of the Conference.

It will be the actions over the coming months and years of the international Community-donors, international organizations and African countries alike, which will determine the ultimate success of ICARA II.

The Conference succeeded in its aim of bringing renewed attention to the continuing plight of the African refugees. This in itself is a positive achievement since there was the danger that the international Community might become immune to this problem which is no longer new.

The theme of the Conference "Time for solutions" was widely approved and it was generally recognized that emergency aid was not sufficient to cope with refugees' needs and that durable solutions had to be found. It was agreed that voluntary repatriation remains the ideal solution, but that, where this was not possible, integrating refugees into the host country and helping the host countries to support the additional burden on their already scarce resources would be necessary. The adoption by consensus of the final declaration and programme of action

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## VISITS

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### UN Secretary-General visits Brussels

Javier Perez de Cuellar, UN Secretary-General since January 1982, visited Belgium in mid-July for talks with the Belgian Government and the President of the Commission of the European Communities. This was the occasion for a working meeting combining the Commission and the UN

Delegation during which Gaston Thorn, who was in the chair, paid homage to Mr Perez de Cuellar for working tirelessly to reduce the great areas of tension and take up the challenges of under-development.

Gaston Thorn again told the UN Secretary-General that the European Community supported his action and



Perez de Cuellar (left) with Gaston Thorn

was attached to the UN and to multi-lateral co-operation. He then gave his guest a run-down of the internal situation in the Community just after the Fontainebleau meeting of Heads of State and Government on 25 and 26 June, saying that the meeting should go down in history as the time when the Community and the construction of Europe had at last begun to make progress again.

The talks with the members of the Belgian Government covered a range of up-to-the-minute problems, including the situation in the Middle East, the Iran-Iraq war and East-West relations in general. On this latter topic, Mr Perez de Cuellar, who had recently been in Moscow, displayed cautious optimism, expressing his belief that the "megaphone exchanges" between the USA and the USSR were quietening down and that the ground was being prepared for a major drive for détente. He had doubts about the wisdom of South African PM Pik Botha's recent visit to Belgium, but the Belgian Government assured him of its keen interest in the matter of Namibian independence.

The talks between Mr Perez de Cuellar and Commission President Gaston Thorn covered a number of subjects, not least the Community's aid to the developing world.

The Secretary-General met representatives of the press in Brussels, answering their questions by emphasizing what the UN had done to solve the very serious conflicts in the world at the present time. In the Middle East, for example, the situation was far from encouraging. Some of the countries invited to a conference on the Middle East had agreed, others had expressed considerable reservations and others had simply refused. The fact that Israel was one of the latter clearly constituted a major obstacle to any such meeting. Proposals of an essentially humanitarian nature had been made to both parties in the Iran-Iraq war and the possibilities of a political initiative had been investigated. An attempt was also being made to find a peaceful solution to the Afghan crisis and Javier Perez de Cuellar said that meetings between representatives

of Afghanistan and Pakistan were scheduled to be held in late August. Other meetings were also planned (including one in Vienna at the beginning of August) between the various parties involved in the Cyprus issue.

So the UN Secretary-General has a busy few months ahead. What is the point, he was asked, of going on looking for answers to problems that were apparently insoluble, bearing in mind that all other attempts to solve them had failed. "It is simply our obligation to continue", he replied. ◦

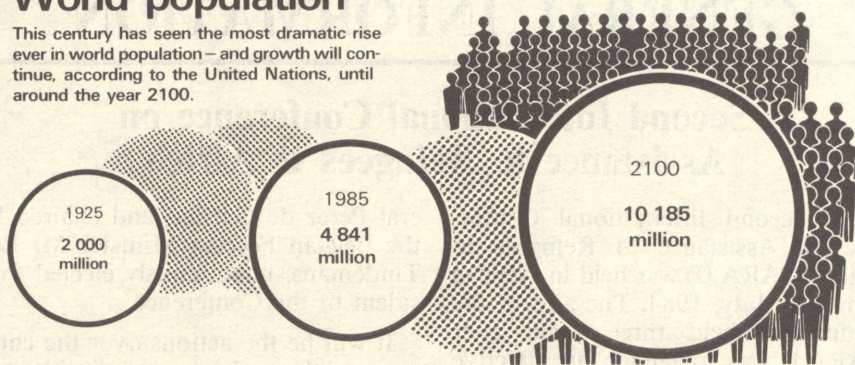
## POPULATION

### A new world plan of action

The second international conference on population, which ended in Mexico

### World population

This century has seen the most dramatic rise ever in world population – and growth will continue, according to the United Nations, until around the year 2100.



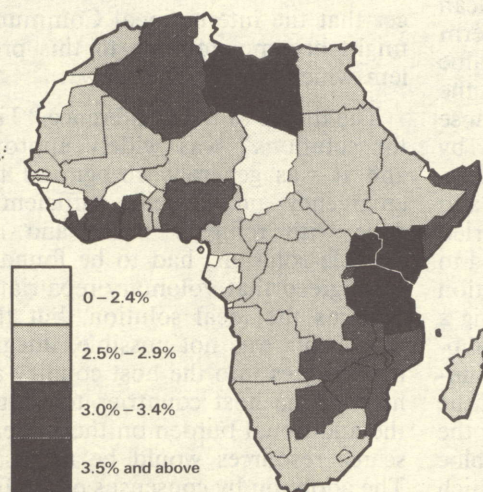
Source: United Nations

### Africa counts the cost

African governments have become increasingly concerned about population issues. This is the continent with the fastest growing population in the world. From 470 million today it will increase to 877 million by the end of the century.

#### GROWING POPULATION

The map is shaded according to average annual percentage growth rate, 1980-85



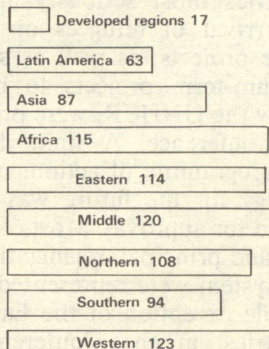
Source: United Nations



#### HIGH INFANT MORTALITY

The prospect of children dying encourages parents to have large families. Infant mortality levels are at their highest in Africa.

Infant mortality per thousand live births, 1980 - 85 average.



Source: United Nations

after nine days of discussions, has passed a "world plan of action" for the next ten years, similar to that which was passed 10 years ago in Bucharest, and also a "declaration of the city of Mexico". This declaration, which the host country urged other participating countries to support, solemnly commits these countries to implement the plan of action in the spirit of "universal brotherhood".

The plan, which was only passed after a number of arguments, particularly with regard to birth control policies, aims firstly to slow down world population growth, which, if nothing is done, will increase from today's figure of 4 500 million to more than 6 000 million by the end of the century. The plan also emphasizes the need for international co-operation in population matters, while taking into account the specific characteristics of each country.

The tables on page X illustrate some of these issues. ○

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## EMERGENCY AID

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The Commission has taken the following decisions on emergency aid.

### Angola:

Three decisions:

The first concerns emergency aid to some 200 000 displaced persons in the country, at a cost of ECU 500 000. It will be used for the purchase, transport and distribution of vital supplies (food, blankets and medicines, etc.) and to provide doctors and health workers.

The aid will be arranged through the International Committee of the Red Cross and several other non-governmental organizations (War on Want, Cebemo, Memisa, Mensen in Nood and Caritas Germanica).

The Commission's other decision concerns emergency food aid for Angola's drought victims, consisting of vegetable oil (ECU 90 000), beans (ECU 120 000) and sugar (ECU 15 000).

Furthermore, poor harvests and internal distribution problems are posing a serious threat of famine to some 125 000 people living in Huila, Cunene and Cuando Cubango provinces. The Commission will provide 200 tonnes of milk powder and 100 tonnes of butteroil as emergency food aid, to cover the needs of about 55 000 peo-

ple for three months. The aid is valued at ECU 547 000.

### Mozambique

A three-year period of drought and the consequent population migration is having a particularly severe effect on people in Tété province. In response to an appeal from the World Food Programme the Commission has decided to allocate 3 000 tonnes of cereals to Mozambique as emergency food aid at a cost of ECU 650 000.

### Thailand refugees and displaced persons

Events in the border area between Thailand and Kampuchea are continuing to affect the local population (231 000 Khmer refugees and 80 000 displaced Thais), who need assistance. The Commission has decided to allocate emergency food aid worth ECU 1 900 000, consisting of 1 160 tonnes of beans and 975 tonnes of fish, to UNBRO (United Nations Border Relief Organization).

### Morocco ECU 500 000

Emergency aid has been made available to the League of Red Cross Societies for its programme to assist drought victims in the southern and south-eastern provinces of Morocco, where about 7 million people are regarded as having been particularly badly hit. The aid will go towards the local purchase and distribution of vegetable oils, chick peas, lentils, etc. ○

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## AFGHANISTAN

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### Aid for Afghan refugees in Pakistan — ECU 1 200 000

The present project, forming part of a programme of micro-actions identified, and in some cases already implemented by UNHCR, is directed essentially towards two actions with the objective of improving self-sufficiency in food production.

The programme consists of two micro-projects for the benefit of refugees in the North-West Frontier Province in the following sectors:

#### Kitchen gardens

30 000 families (210 000 persons approximately) will be assisted in setting up kitchen gardens to produce part of their nutritional needs. They will be

supplied free of cost with simple tools, seeds, insecticide and fertilizer. Local agricultural experts will be provided for the project, to train and assist the refugees and ensure the progress of the project. Sites will be selected in relation to availability of water. They will be, in general, in villages near to Peshawar, Mardan, Abottabad, Malakand, Buner, Diz-Sud, Bajaur, Kohat and Hangu.

#### Poultry breeding

Based on pilot projects already conducted by HCR in the region, it is proposed to initiate 10 000 more families into poultry breeding to produce eggs for the family diet and to introduce a small cash trade among refugee groups. ○

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## AID TO NON-ASSOCIATED COUNTRIES

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As part of its programme of financial and technical aid to non-associated developing countries, the Commission has taken the following financing decisions:

**Agricultural research centres:**  
ECU 6 000 000

#### Aid for research

This programme follows on from the Community's initial 1977 contribution and subsequent aid to international agricultural research centres sponsored by the Consultative Group for International Agricultural Research (CGIAR). It covers five research centres: CIAT (International Centre for Tropical Agriculture, in Colombia), CIP (International Potato Centre, in Peru), ICRISAT (Institute for Crop Research for the Semi-Arid Tropics, in India), IRRI (International Rice Research Institute, in the Philippines) and ISNAR (International Service for National Agricultural Research, The Hague).

The proposed programme is part of the Community's wider support for agricultural research.

**India:** ECU 33 000 000

#### Supply of fertilizers

The programme will enable India to finance imports of fertilizers from the Community costing ECU 33 000 000. The equivalent value in local currency, determined on the date of signa-

ture of the Financing Agreement, will be entered in India's general budget as an EEC grant earmarked for financing the local costs incurred in respect of three specific projects:

1. Extension work in connection with the use of fertilizers

The projects consists of setting up an integrated, intensive support system for farmers whereby those responsible for extension work and training will attempt to promote certain techniques, such as the effective and correct use of fertilizers according to the type of soil and crop, the adoption of various farming practices and use of suitable inputs, the efficient use of organic waste, etc.

2. Reclamation of saline lands in Maharashtra

The project consists of the protection of low-lying land in the coastal plains of Maharashtra against seawater encroachment through river estuaries at each high tide, the desalination of saline soils and the construction of irrigation and drainage systems in the areas thus reclaimed in order to render them suitable for agriculture.

3. Small-scale irrigation in Gujarat

Under the 6th Five-Year Plan, Gujarat State is implementing a programme of small-scale hydro-agricultural improvements covering 24 separate areas with a total area of 33 405 hectares. The areas chosen are in places where no large irrigation projects have yet been carried out.

Within this programme, the Community's aid will cover the cost of one of these areas plus that of a pilot water management scheme.

**Maldives : ECU 1 790 000**

**Construction of a water supply network and drains in Male**

Through this project, the Maldivian Government intends to supply the inhabitants of Male with fresh water.

The central features of the project are the improvement of the existing network of wells in the mosques, the extension of roof catchment systems to all buildings (public and private), piped water distribution systems, drainage systems and the installation of a plant for desalinating seawater.

**Bangladesh : ECU 10 000 000**

**Grain seeds**

The purpose of this project is to increase food self-sufficiency by improving the quantity and quality of the

country's cereal production. The project will strengthen the infrastructure and provide the technical assistance needed in order to produce high-quality grain seeds.

**Asean : ECU 7 500 000**

**The Asean Timber Technology Centre**

The purpose of the project is to provide financial and other aid (mainly in the form of technical assistance, equipment and a contribution to the running costs) for the setting up of a research and training centre for the timber industry in the ASEAN countries. The ASEAN Timber Technology Centre (ATTC) will have its headquarters in Kuala Lumpur, but will serve the whole ASEAN region, coordinating and supporting regional research activities and providing related training and information services.

**Bolivia : ECU 3 400 000**

**Reconstruction programme**

This programme involves the rebuilding of a road bridge over the Rio Cesarsama (Pont Cesarsama) in the department of Cochamba, flood protection for two small villages (less than 35 000 inhabitants), Trinidad and Santa Ana del Yacuma, in the department of Beni, and financial and technical assistance for a programme already under way (PHICAB), this latter programme mainly concerns the building, notably the setting up of advance warning stations on the slopes of the Amazon basin to study rain and water levels and give advance warning of flooding.

The reconstruction programme has three objectives:

- social: to enable the inhabitants of the two towns of Trinidad and Santa Ana to live in salubrious conditions;
- economic: to re-establish road traffic on the highway served by the bridge about to be rebuilt;
- preventive: there will eventually be a positive social and economic impact when it becomes possible to give advance warning of the risk of flooding so that preventive action can be taken to save not only human and animal life, but also infrastructure and installations.

**JUNAC (Andean Pact) : ECU 7 000 000**

**(Peru, Bolivia, Ecuador, Colombia, Venezuela)**

**Food strategy and security**

This regional programme consti-

tutes a coherent package of pre-investment operations (expert reports, studies, analyses, recommendations, and training focused on the priority theme of food strategies and security.

After some years of efforts to achieve regional integration based predominantly on industrialization, the Andean Pact countries have recently changed course by giving priority to the rural sector, the main aim being to reduce the sub-region's economic dependence where basic foodstuffs are concerned.

The programme, to be implemented at sub-regional level by the Junta del Acuerdo de Cartagena (JUNAC), the Andean Pact's technical and administrative integration arm, will focus for three years (1984-86) on a limited number of staples: rice, maize, sorghum and short-cycle oleaginous plants. All aspects of these products is covered (plus certain aspects of other crops and livestock products) including the planning stage, policy, strategy, management, production proper, trade, industrialization (agribusiness) and training.

This programme includes institutional back-up for JUNAC by means of high-level advisers and experts who will work with the Junta.

This will help bridge the critical gap between reorganization of the Andean sub-region's integration process and its translation into regional policies and priority practical measures. ○

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## EEC-EGYPT

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The Commission has decided to finance two projects in Egypt from the funds earmarked under the EEC-Egypt Co-operation Agreement.

**Co-operation between universities:**

ECU 3 000 000

The purpose of the project is to provide support for teaching, training and applied research capacity at the Suez Canal University (SCU) in the related fields of marine sciences and fish breeding, by establishing direct links between the SCU and two European universities specializing in these areas. The project is divided into two sub-projects:  
(a) marine sciences, which will be strengthened through co-operation between the SCU and Liverpool University (United Kingdom);

(b) production of brine shrimp (*Artemia*), an essential nutrient used in fish breeding, will be developed through co-operation between the SCU and the brine shrimp (*Artemia*) reference centre at Ghent University (Belgium).

### **Studies on a thermal power station: ECU 2 000 000**

The project consists of a set of feasibility studies which will look into the economic, financial and technical aspects of a new thermal power station. The power station, with a capacity of

1 200 MW, will be built at Sidi Krir, 32 km west of Alexandria. The studies will be carried out in two phases. Phase I will analyse supply and demand and look at other possible sites for the power station, as a comparison. In Phase II, an in-depth feasibility study will be undertaken. ◊

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## EUROPEAN COMMUNITY

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### **Pierre Pflimlin elected President of the European Parliament on the second ballot**



*Pierre Pflimlin being congratulated by his colleagues after his election as president*

The new Parliament elected in June this year met in Strasbourg for the first time on Tuesday, 24 July. This session, of course, opened with a speech by the eldest member, France's 78-year old Jacqueline Thome-Patenôtre. The speech scheduled to be given by 81-year old Nikoas Gazis had to be cancelled as the Greek Socialist MP was too ill to travel.

#### **The time has come for a political Europe**

Mrs Thome-Patenôtre, who is Vice-President of the European Movement, thanked all European militants, stressing it was in a large part thanks to them that the elections to the European Parliament by universal suffrage had taken place. She also mentioned the outstanding figures of the pioneers of Europe, most of who she had known during her parliamentary career and life as a European militant.

After going over what the European Community had achieved, the oldest member strongly insisted on the need to press ahead. She said that more and more voices of authority were calling

for a defence policy and she stressed the need to ensure Europe's safety, both within and without. This led her to condemn a certain kind of terrorism aimed at destabilizing European democracy, something that "should be our number one enemy". She also emphasized the danger of a "a certain pacifism which fails to put the defence of peace on the same plane as the defence of liberty and which would play into the hands of any power that banned public manifestations on its territory or on any territory under its control".

Jacqueline Thome-Patenôtre felt that "the time has come for a political Europe". This means a still-too-hesitant return to the qualified majority rule, creating a permanent Secretariat for the European Council and running practical schemes to implement both the Colombo-Genscher plan and the great idea of the Treaty on European Union. Lastly, she stressed the need to increase the role of the European Parliament. Parliament had, she felt, to take part, for example, in the two *ad hoc* Committees set up at Fontainebleau and in the investiture of the next

Commission of the European Communities.

She had no doubt that "the European Parliament will one day be called upon to legislate on these subjects — which can only be settled by a European answer".

#### **221 votes for Pierre Pflimlin on the second ballot**

Parliament then went on to vote for its President. In the first round, Pierre Pflimlin (PPE, France) got 165 votes, Piet Dankert (outgoing President and a Dutch socialist) 123, Lady Elles (European Democrat, UK) 44, Gian-Carlo Pajetta (Communist, Italy) 37, Mrs Bloch von Blottnitz (Ecologist, Germany) 17, Jean-Marie Le Pen (European Right-Wing Group, France) 16 and Altiero Spinelli (Independent Left, Italy) 11.

Since there was no absolute majority, a second ballot, in which 421 members voted and there were 403 votes cast, was held, with the following results — Pierre Pflimlin 221, Piet Dankert 133, Altiero Spinelli 49.

So Pierre Pflimlin was elected outright and with a very clear lead. This was in line with the logic of parliamentary arithmetic. The left is still in a minority in the new House, but Mr Pflimlin's success was helped by the fact that Piet Dankert did not collect all the left's votes and that Altiero Spinelli failed to obtain significant support. However, the most important thing is that the British Conservatives, who made the Socialist win possible in 1982, voted for Pierre Pflimlin in the second ballot this time.

#### **Europe is a revolutionary idea**

In his inaugural speech, Pierre Pflimlin talked of the fathers of Europe, citing particularly the speech made on 9 May 1950 by Robert Schuman, whose disciple he felt himself to be.

The new President also spoke out

against what he called Euro-pessimism, pointing out that it was Europe's intellectual resources and its ability to innovate that had given it its incomparable influence. He underlined the need for a joint effort in technological and scientific research.

However, this did not mean that national egoism had simply to be replaced by European egoism. The new President emphasized the fact that the Europe we want knows where its interests lie, but it also knows where its responsibility towards the rest of the world, particularly the poorest countries, lies. Pierre Pflimlin then mentioned the problems of security and called for greater solidarity within the Community.

On the subject of the powers of the European Parliament, Mr Pflimlin paid tribute to the efforts of his two predecessors, who had done their utmost for Parliament's budgetary powers — the only real powers the Assembly had. But Parliament was not anxious to find itself in conflict with the other institutions, particularly the Commission, whose difficulties it understood.

The President mentioned the interest of the project on European Union and paid tribute to Altiero Spinelli and then came to the idea of the *ad hoc* Committee devised at Fontainebleau, suggesting that it was "difficult to admit that a committee composed of representatives of State and Government should prepare an institutional reform if the European Parliament was not involved in its work. This would be properly speaking inconceivable".

President Pflimlin wound up by stating his conviction that "Europe is a revolutionary idea" and that our young people must be convinced of the fact.

It is worth noting that the new House that listened to Pierre Pflimlin's inaugural speech is substantially younger than the one elected in 1979 — the average age is 50.5 years, as against 54.6 before. The oldest Member may be an 81-year old Greek, but, remarkably enough, the youngest Member, German ecologist Benny Härlin, is only 27. The longest-serving member is a German Christian-Democrat, Heinrich Aigner, who has sat in the European Parliament without interruption since 1961. Most of the Euro-MPs will be concentrating on their new duties and nothing else, as only 49 of them now have dual man-

dates (as against 125 before). What do the new MPs do? There are 129 civil servants (including 76 teachers), 50 tradesmen and businessmen, 44 from the press and the media, 41 from the liberal professions, 23 farmers, 18 manual workers, 15 scientists, 8 writers and artists, 7 union officials, 6 clergymen and a certain number of others in a variety of professions. Lastly, the

new House contains 75 women. This is six more than last time, but still only 17.3 of the total. ◊

#### **Bureau of the European Parliament**

**President:** Mr Pflimlin.

**Vice-Presidents:** Mr Alber; Mrs Cassanmagnano-Cerretti; Mr Dido; Lady Elles; Mr Fantì; Mr Griffiths; Mr Lalor; Mr Møller; Mr Nord; Mrs

## **An outstanding European and Christian-Democrat**

Pierre Pflimlin, a Frenchman, was born in Roubaix on 5 February 1907. His secondary education was undertaken at the Lycée de Mulhouse and he went on to the Institut Catholique in Paris and the University of Strasbourg, gaining the degree of Doctor of Law.



He was elected MP for the Bas-Rhin in the constituent national assembly of 1945 and was re-elected to the same seat in 1946, 1951, 1956, 1958 and 1962. He was mayor of Strasbourg for almost 25 years (from 1959 to 1983), President of the Communauté Urbaine de Strasbourg from 1968 to 1983 and he chaired the Conseil Général du Bas-Rhin in 1951-60.

Mr Pflimlin served in almost all the Fourth Republic governments and was 15 times in office, notably as Minister of Agriculture (1947-49 and 1950-51), Minister for Trade and External Economic Relations (1951-52), Minister of State for Relations with the Council of Europe (1952), Minister of France Overseas (1952-53) and Minister for Financial and

Economic Affairs (1955-56 and 1957-58). He was President of the Council of Ministers in May-June 1958, Minister of State in the de Gaulle government from June 1958 to January 1959 and then Minister of State for Co-operation from 15 April to 15 May 1962. He was National President of the MRP (the Mouvement Républicain Populaire, a Christian-Democrat party that no longer exists as such) from 1956 to 1959.

Mr Pflimlin was a member of the Consultative Assembly of the Council of Europe and the European Parliament from 1959 to 1967, President of the Consultative Assembly of the Council of Europe from May 1963 to May 1966 and has been a vice-president of the European Parliament since July 1979. He has published a number of works and, in particular, "L'Europe communautaire" (in collaboration with Raymond Legrand-Lane) in 1966.

When he welcomed General de Gaulle to Strasbourg, he said he saw that city as a "symbol of reconciliation and the keystone of European unity". Pierre Pflimlin is a man of integrity and austerity and one who commands respect. His name means "little plum" in Alsatian—something which Sir Henry Plumb, the British Chairman of the European Democrats, could not fail to joke about at the opening session on 24 July. He is a fine speaker and a well-informed music lover. At 77, he nearly qualified to make the oldest Member's speech as well as his own as President after his easy election on 24 July 1984. But he is in fine form, does not think he is in the last year of his youth, in spite of the fact that, as the French daily informs us, Tintin, a character in a comic strip read by youngsters from 7 to 77, is still one of his heroes. ◊



Pery; Mr Plaskovitis; Mr Seefeld.

**Quaestors:** Mr Glinne; Mr Wawrzik; Mr Maher; Mr Simpson; Mr Carossino.

### Chairmen of the Political Groups

**Socialist Group:** Mr Arndt.

**EPP (European People's Party):** Mr Klepsch.

**European Democratic Group:** Sir Henry Plumb.

**Communist and Allies Group:** Mr Cervetti.

**Liberal and Democratic Group:** Mrs Veil.

**Group of the European Democratic Alliance:** Mr de la Malène.

**Rainbow Group:** Chairmen: Mrs Hämmerich, Mr Vandemeulenbroucke, Mr van der Lek and Mr Staes.

**The Group of the European Right:** Mr Le Pen.

### Number and composition of the Committees

The European Parliament has decided that it will have the following committees: 1. Political Affairs Committee (45 members); 2. Committee on agriculture, Fisheries and Food (45 members); 3. Committee on Budgets (42 members); 4. Committee on Economic and Monetary Affairs and Industrial Policy (42 members); 5. Committee on Energy, Research and Technology (30 members); 6. Committee on External Economic Relations (25 members); 7. Committee on Legal Affairs and Citizens' Rights (25); 8. Committee on Social Affairs and Employment (30); 9. Committee on Regional Policy and Regional Planning (28); 10. Committee on Transport (24); 11. Committee on the Environment, Public Health and Consumer Protection (31); 12. Committee on Youth, Culture, Education, Information and Sport (24); 13. Committee on Development and Cooperation (42); 14. Committee on Budgetary Control (30); 15. Committee on Rules of Procedure and Petitions (25); 16. Committee on Institutional Affairs (30); 17. Committee on Women's Rights (25).

The European Parliament adopted an amendment by Mrs Vayssade (Socialist, France) laying down the scope of this latter Committee, which shall define and develop women's rights, apply and improve directives on equality and the employment policy for women and girls, deal with com-

## Jacques Delors: next President of the Commission

Jacques Delors, the father of France's economic stringency under the Mauroy Government, will be the next President of the Commission. The present President, Luxembourg's Gaston Thorn, commented on the appointment, saying that he was pleased that his successor was a "convinced European, a man who is competent and rigorous and recognized as such by all those who have had the opportunity of working with him".

In recent years, when he was a Euro-MP and head of France's Ministry of Economic and Financial Affairs and President of the Council of Ministers, I have had the opportunity of appreciating Jacques Delors' profound commitment to Europe", Thorn said, "his vast knowledge of European and international economic and financial affairs, his constant concern for close collaboration with the Commission and his exceptional human qualities, even at the most difficult moments".

In European circles this appointment immediately raised hopes of a stronger Community executive with fresh impetus as the President of the Commission's personality is felt to be decisive when it comes to arbitrating in conflicts and leading the action of the 14 members the governments appoint to the Commission—particularly since that President represents the European Community at all the economic summits of Heads of States and Government.

This European task will not put off Socialist Jacques Delors. He is an unconditional defender of the European Monetary System (EMS) and already showed his attachment to Europe in 1979 and 1981 when he chaired the European Parliament's Committee on Economic and Monetary Affairs. In March 1983, he strongly opposed those members of the French government who wanted to leave the EMS.

Jacques Delors was born in Paris on 20 July 1925. He obtained a degree in economics and a diploma from the Centre d'Etudes Supérieures de Banque and, between 1945

and 1962 was Head of Department with the Banque de France. He was a member of the planning and investments division of the Economic and Social Committee from 1959 to 1961 and became head of the Department of Social Affairs at the General Commissariat for Planning in 1962, a post he held until 1969 when he was appointed Secretary-General of the Inter-Ministerial Committee for vocational training and social promotion.



In 1969, Jacques Chaban-Delmas, the then Prime Minister, made him an adviser on social and cultural affairs and subsequently chargé d'affaires. He sat on the general board of the Banque de France in 1973-79 and, from 1973 onwards, was also associate professor of company management at the University of Paris IX (Dauphine). In 1974, he founded the exchange and project club. He became a national Socialist Party delegate for international social relations in 1976.

On 10 June 1979, he was elected to the European Parliament (he was on the Socialist lists) and appointed chairman of the Economic and Social Committee.

Since François Mitterrand became President of the Republic in 1981, Jacques Delors has held a number of posts in the various Mauroy governments. ○

mon policies where they affect women (including in the field of information), with women's work and their role in the family, with women in the EEC institutions, with the situation of women who are the wives of migrant workers or migrant workers themselves and with the world women's conference. ◦

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## ENLARGEMENT

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### Spanish accession to the Community is well on the way

When talks turned sour within the Ministerial negotiations between the EEC and Spain on Spanish accession to the Community in Luxembourg on June 19, anything could have happened. But, just in time, French Minister for External Relations Claude Cheysson took the initiative and called a special working session between Mr Moran and Mr Marin, respectively Spanish Minister and Secretary of State for Foreign Affairs and Mr Dumas, the French Minister for European Affairs, Mr Barry, the Irish Minister of Foreign Affairs, who took over from the French as President of the EEC's Council of Ministers on July 1, and Messrs. Natali and Davignon, two of the Vice-Presidents of the European Commission.

This 'triangular session' produced excellent results. Each side was able to indicate what concessions they could make in the agricultural and industrial sectors. So conclusive were the talks, that within only a few hours, the participants were able to adopt a compromise which the other EEC Member States accepted the following day. The negotiations did not, however, go into the small detail and several points remain to be resolved. But the will to arrive at a conclusion was definitely seen in Luxembourg.

### A long transition

The EEC Member States, worried over the preparations needed to ready their agricultural production for competition from Spain, want to set a transition period as long as 10 years before Spanish agriculture can benefit from the advantages of the Common Agricultural Policy (CAP). Spain accepted the EEC point of view, agreeing that the EEC hold off tariff reductions on fruit and vegetables until four years following accession. In return, the EEC agreed to let Spain take its own measures in sectors it deems 'sensi-

tive' such as cereals and livestock products.

On the question of *wine*, a certain ambiguity persists over the ways and means to control production and increase quality. Madrid insists that the measures to be decided by the Community should be applied to all Common Market countries. In other words, Spain wants to be treated in the same way as France or Italy, while the EEC notes that account must be taken of the different situation in one country and the other. On all issues concerning *fisheries*, the Spanish authorities and the Community are still far apart.

The two sides are nearer agreement, however, on *industrial affairs*. It is well known that Spain, so strong in the agricultural arena, is less confident about competing with the industries of Northern Europe. It is requesting, as a result, that the free circulation of goods should not come about until seven years after accession. The EEC, however, which is interested in benefiting from this new market, had proposed a transition period of three years, but agreed, following the Luxembourg talks, to extend this by another three years.

The problems posed by Portuguese accession to the EEC will, on the whole, be less difficult to resolve than those posed by the Spanish. The negotiators have progressed a great deal on agricultural issues and hope to conclude talks on this important subject in July. This will leave only fisheries and social affairs to conclude to allow the treaty to be finalised.

### Debate on changes to Mediterranean contracts

On June 18, the EEC Ministers of Foreign Affairs held their first exchange of views on the measures needed to reduce the possible negative effects which EEC enlargement to include Spain and Portugal could have on the economic and political situation of their Mediterranean partners. The Ministers confirmed the fact that the EEC is well aware of its responsibility vis-à-vis the countries of the Mediterranean Basin and that it is fully prepared to face up to this. But how?

Within the EEC, however, there is a distinct North/South divide over what measures should be taken to this end and, as a result, during these preliminary discussions, the Ministers were unable to see eye to eye on the scheme proposed by the French.

The French plan is based on three main ideas: 1) maintenance of present trade flows and a return to the regime set for textiles products; 2) search for a type of complementary production between the North and the South of the Mediterranean; and 3) increased financial assistance.

Each of these suggestions has its supporters. The United Kingdom, Germany and Holland are in favour of trade concessions mainly because these would cost them little as the products in question do not compete on their market. They are, however, opposed to any increase in financial aid. On the other side, Italy and Greece note that any further trade concessions would penalise agricultural production at home and it would be unfair to ask them to make further sacrifices when they are already the EEC Member States most threatened by the entry of Spain and Portugal to the Community. They claim it would be better to increase aid rather than modify the rules of the Common Agricultural Policy to benefit third countries.

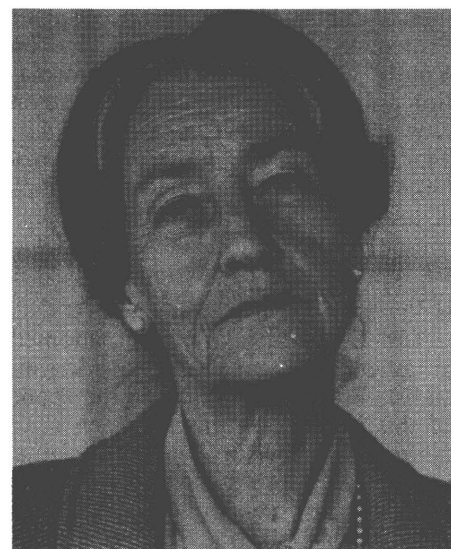
Still far from agreement on this question, the EEC Member States have decided to postpone further discussions for several months while awaiting the virtual conclusion of the accession treaties for the two new candidates. In the meantime, the EEC will continue holding exploratory talks with the Mediterranean countries. A second round of talks has already been held with Israel and another round is expected to be held with Morocco. ◦

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## PARLIAMENT

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### Mrs Focke, new President of the Development Commission



their colleagues from other Member States, Community officials and people from the profession.

Is not a constant struggle to keep the common market going needed in view of the many barriers to free circulation and free competition as we saw in the lamb, Italian wine and Breton poultry affairs?

Has the common agricultural policy helped with the development of other regional, industrial and monetary policies? Should it? Is not the development of the CAP mortgaged by the monetary compensatory amounts?

How can the aims of the CAP and the aims of the trade policy or the development policy of the Community's partners be reconciled in the future? Long-term supply contracts and an export credit policy seem more necessary now than ever they were.

How has the CAP fitted into the Community system? Bearing in mind the record and the details of the agrobudgetary problems it seemed reasonable to wonder what sort of Community a reform of the CAP would open the way to.

A quarter-century after the famous Stresa conference, has Rennes opened up new prospects? The reader must judge.

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International Labour Organization, Geneva — *Le travail dans le monde* (Work in the world) — 225 pages — FS 45 — 1984

This is the first ILO publication of its kind and the first in a series of reports on the great problems of labour in the world today. The work, which outlines the ILO's constant and abundant influx of information, its work and the lessons it can learn from its activity, is intended for everyone concerned with labour problems — trade unionists, heads of firms, civil servants, politicians, teachers, researchers, the media and anyone worried by the future of society. The prime aim is a practical one, i.e. to provide a clear, concise series of facts and elements of appreciation, an objective and methodical picture that outlines the many aspects of labour today.

This book, volume one in the series, covers employment (the under-utiliza-

tion of the work force and poverty in the developing countries, employment in the industrialized market-economy countries and in the planned economies of eastern Europe plus the international movement of migrants in search of work), wages and salaries in the world today (trends and problems), social security in the most industrialized countries and new information techniques (their effect on unemployment, working conditions and professional relations).

An annex contains statistics on the structure of the working population, a breakdown of incomes in a certain number of countries and social security. An additional attraction is the special typographical presentation and the more than 50 charts, many illustrations, notes and insets.

Volume two, scheduled to appear in the second half of 1984, will cover the social dialogue, trade union freedom, professional relations, training for employment, working conditions and women's work.

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*Travailler et vivre à l'étranger* (Living and working abroad) — Editions du Centre International de Formation des Cadres du Développement ASBL, 6, rue de l'Invasion, B-1340 Ottignies Louvain-la-Neuve — 130 pages — Bfrs 3000 — 1984

Deciding to live and work abroad takes a lot of effort and a lot of flexibility. The spirit of adventure is still with us, of course, but supervised adventure that is carefully and efficiently prepared is best. Proper groundwork and information are sound assets when it comes to successful emigration and hesitancy about finding a job abroad very often comes from inadequate knowledge about the various aspects. Information should cover: an analysis of the methods and procedure for finding jobs abroad; how to negotiate a contract of employment; social protection; equivalent diplomas; civil services in the developing countries; health arrangements; administrative formalities; living conditions in the host country; general problems of emigration.

The "Centre International de Formation des Cadres du Développement" (CIFCD) which is concerned

with transferring our qualified people abroad is trying to provide details of all these topics. Its activities have included bringing out this guide on living and working abroad, a 130-page book full of practical information and advice on emigration.

Ultimately everyone may have to work abroad and anyone who is dynamic and fond of responsibility can learn to do so.

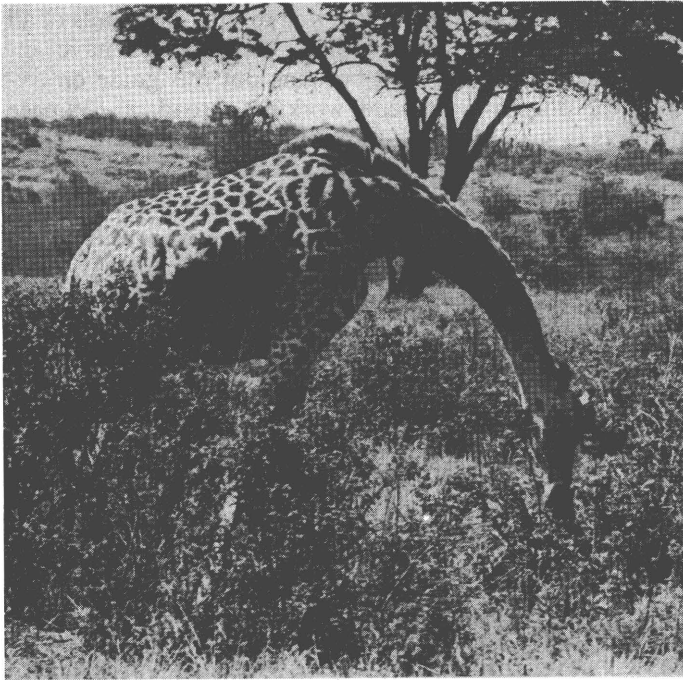
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John FARNELL & James ELLES — *In Search of a Common Fisheries Policy* — Gower Publishing Co Ltd (Croft Road, Aldershot, Hants GU11 3HR, England) — 213 pages — \$28.50 — 1984

This book, by two officials of the European Commission (one of whom being the son of Lady Elles, Conservative, who has now also been elected member of the European Parliament) who have helped to establish the common fisheries policy, is primarily the history of the EEC fishing industry during the last decade, in which it has been hit by great economic and political upheavals. The authors describe the difficult negotiations which led to the Council Decisions of 25 January 1983, i.e. six years after the Hague Summit which had demanded the immediate adoption of the common fisheries policy. This long delay may be explained by both purely technical obstacles as by the political obstinacy of some governments. The authors try to explain the reasons—internal reasons, but especially external pressures—which finally brought the Council to adopt a common fisheries policy. A very interesting chapter describes the role played by the various Community Institutions—which is not always in accordance with the theory of decision-making—and particularly that of the Court of Justice of the European Communities.

For the future, the authors particularly recommend a Community effort in the field of research (scientists are only asking to co-operate). They describe the major problems which will be raised: industrial restructuring and technological progress (and the effect upon employment), bureaucratic control, national aids, enlargement and the fisheries policy in the Mediterranean. o

# Environment and



*Wildlife*



*Forest*



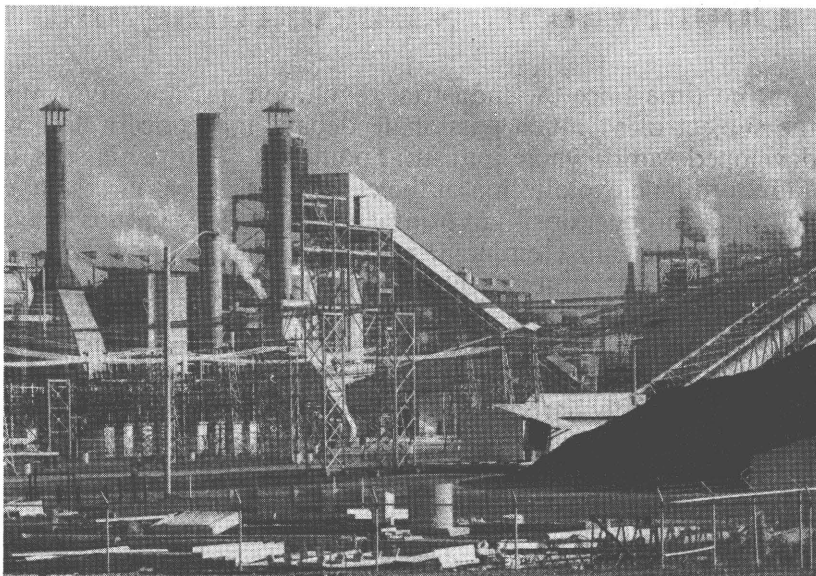
*Desertification*

# development

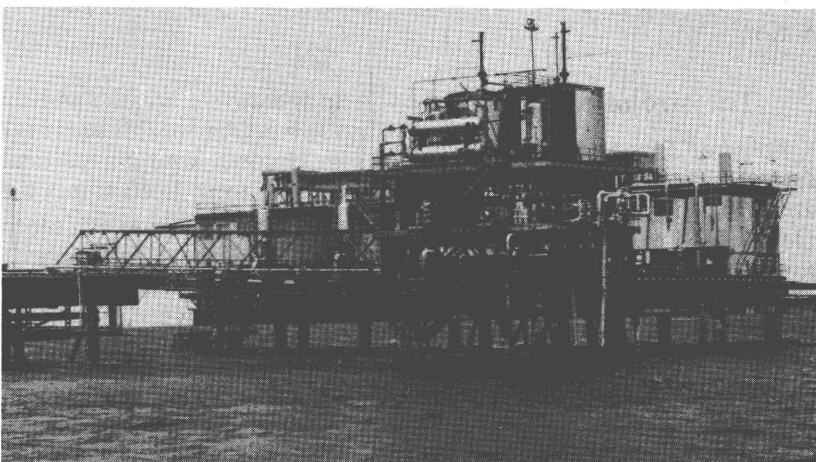
From the moment he gave up wandering and living off the wild for a life of settlement and industry, man began to damage his environment. This process accelerated with the industrial revolution and will, experts predict, culminate in an ecological disaster of an unimaginable proportion if urgent remedial measures are not taken.

How really close are we to such a disaster? What steps can be taken to avert it? Is development compatible with concern for the environment and can the Third World afford to pay attention to what appears likely to retard its development?

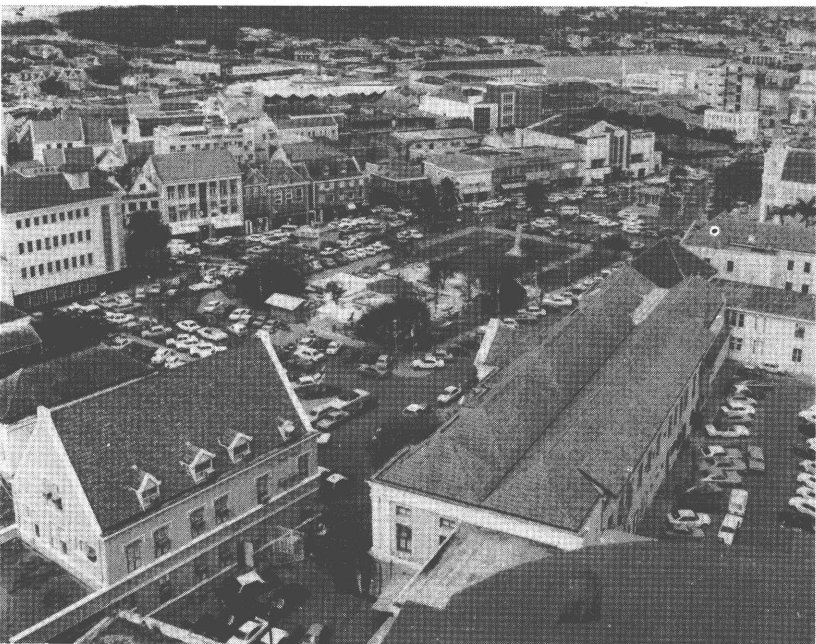
As the environment becomes a burning issue in development matters all over the world, the *Courier* tries, in this dossier, to measure the problems and venture solutions with contributions from a number of experts, among them Mr Jon Tinker, director of Earthscan's London office, who analyzes the link between environment and development and how they have affected the Third World; Dr Mustafa Tolba, Executive Director of the United Nations Environment Programme (UNEP) and Mr Hemmo Muntingh, a Member of the European Parliament and chairman of the ACP-EEC Joint Committee on the environment, who warn, in separate interviews, of a rapidly deteriorating situation and the urgent need to preserve, first and foremost, our plant and animal species. We have also, among others, articles on deforestation, desertification, wildlife protection and urban pollution as well as three case studies of the African, Caribbean and Pacific regions. A.O.



*Industrial pollution*



*Marine pollution*



*Urban environment: a high degree of pollution which is invisible*

# Doomwatch: safeguarding our life-supporting systems

At no time since the industrial revolution has our environment been the subject of so much passionate debate and concern as now. In the developed world, where industrial pollution of air, land, seas and rivers and inordinate exploitation of the earth's natural resources have reached alarming proportions, environmental pressure groups have mushroomed, with most employing forceful, and sometimes unorthodox, means to bring home to their public and governments the imminent danger facing mankind: street and roof-top protests, sit-ins, sabotage of installations and high-seas campaigns that have seen activists, in recent years, go to the extraordinary length of placing themselves in the trajectory of the deadly harpoons of whale hunters in desperate efforts to save the blue whale population. Others have resorted to democratic means by participating in elections and winning impressive victories. In the Third World, where ecological imbalances have posed development dilemmas and caused poverty, malnutrition and starvation, the significance of the environment in the development process is increasingly being understood, thanks mainly to the campaigns of information waged by environmental groups. Governments, as a result, are being galvanized into action.

## The size of the problem

Forty or fifty years ago, such passionate demonstrations of feeling about the environment were unthinkable, let alone governments being forced into action. An ecology parliamentary or presidential candidate would have been seen merely as a clown, while a high-sea *Greenpeace* campaigner would almost certainly have been considered a serious candidate for a mental institution. Although most of these environmentalists are still seen in many quarters as freaks out to put a spanner in the works of economic progress and the material well-being of man, the truth is beginning to dawn on politicians and economic planners alike that our life-supporting systems are threatened and that the sooner action is taken to safeguard them the better. The seriousness of the situation is borne out by the following incontrovertible facts:

— our planet is becoming overcrowded;

— the ozone layer, which protects the earth's surface from ultraviolet flux of the sun is believed to be depleting as a result of chlorofluorocarbon pollution of the stratosphere. Chlorofluorocarbon is a substance used mainly as aerosol propellant. If this proves to be correct, then all forms of life on earth are threatened;

— lead which emanates from the fumes of motor vehicles, is increasing

in the air we breathe and this constitutes a great health hazard, especially to children who are particularly vulnerable to it. Lead stunts the brain;

— carbon dioxide concentrations in the atmosphere have reached dangerously high levels, chiefly as a result of increasing use of fossil fuels and forest clearing. The consequences are, indeed, already being seen in acid rain which, in recent years, has destroyed large areas of forests and polluted lakes and rivers;

— marine pollution through discharges of toxic wastes—nuclear, chemical, oil, etc.—which has caused major ecological disasters in recent years, remains one of man's greatest environmental problems. Pollution of the seas threatens marine life and one of mankind's major sources of food;

— forests are said to be diminishing at the rate of 12 million hectares per annum through logging, clearing for farming and firewood. The indispensability of forests to life on earth can not be underestimated, for apart from being major sources of food, they provide all the oxygen in the atmosphere, help regulate its carbon dioxide content and, through their exchange of gases with the atmosphere, modulate global climate. Indeed, in most parts of the world, it is their moderating effect on the climate that makes life and agriculture possible. The roots of plants, on the other hand, help hold

the soil in place and are known to play an important role in recycling of fresh water. In short, the earth will be uninhabitable without forests;

— as forests and plant species disappear, so are wildlife deprived of their natural habitats. Many animal species have become extinct as a result and more are bound to disappear in this wanton destruction of forests. It is estimated that for every species of plant that becomes extinct, 10 to 30 organisms disappear with it. Add to this the legal and illegal hunting of wildlife all over the world and one has an idea of the scale at which our natural heritage is being destroyed;

— it is now common knowledge that the earth's mineral reserves, especially fossil fuels, are limited and that at the present rate of exploitation resources will be exhausted in less than half a century.

## International reaction

Man has, of course, throughout history, expressed concern about his environment and has reacted when the environment itself exerted pressure on him. Fog-bound Britain, for example, with the darkened walls of her metropolis and cities and her de-oxygenated River Thames would not have passed the Clean Air Act of 1968 and launched the campaign to keep the River Thames clean in 1964 had the environment not forced them upon her. In like manner, many countries in the industrialized world have had to take action in the 1960s to protect the environment when the need arose. However, it was not until the United Nations Conference on the Human Environment in Stockholm in 1972 that nations began to analyse seriously the problems and to take concrete measures at both national and international levels. That conference, it should be recalled, declared "the protection and improvement of the human environment as a major issue which affects the well-being of peoples and economic development throughout the world; and as the duty of peoples and governments". Attended by some 113 countries, the conference was followed in 1973 by the establishment of the United Nations Environ-

ment Programme (UNEP) which has, since then, contributed tremendously to reminding governments of the Stockholm declaration and to raising the consciousness of the world to the immensity and gravity of the ecological problems facing our planet.

### A question of will

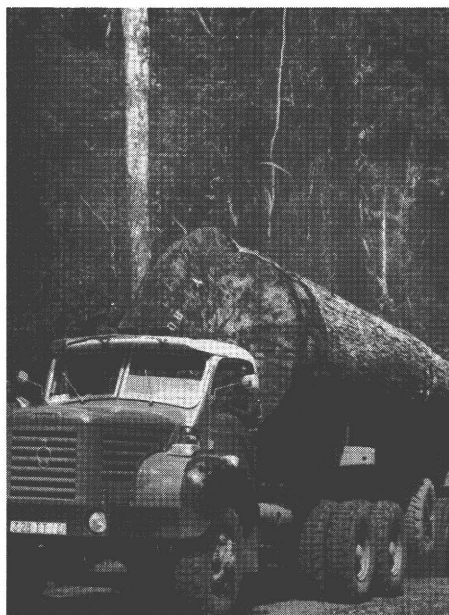
The spread of environmental pressure groups, the interest of the media in the issues and the increasing public awareness of them may justify a certain sigh of relief and even a reason for hope, but the task ahead is formidable and the question is whether humanity has the ability and will to face it.

Man has demonstrated, since creation, his ability to rise to challenges to his existence, but the issue today is not so much his ability or scientific and technological knowledge (which have enabled him to overcome those challenges) as to his will to act at this crucial moment. That will appears to be lacking.

Surely science and technology have proved useful in monitoring and measuring our environmental problems and in providing solutions to most: satellite and aerial surveys now permit us to monitor pollution of the atmosphere and the stratosphere, the advance of deserts, exploitation of underground water; research into the formation of acid rain and its distribution; research into genetics and artificial insemination as ways of reconstituting plant and animal species threatened with extinction; devising of alternative aerosol propellants to chlorofluorocarbon; reduction of lead in petrol, to mention a few. But to subscribe to the kind of suggestion made recently by space visionary Krafft Ehrlicke, of extraterrestrial industrial expansion—moving our industrial activities into space and even onto the moon—as a way of limiting the damage to our planet's ecosystems is to overlook the immediate and practical measures that the present state of our environment calls for and of which man is capable of responding adequately given the will.

On the surface, it all appears simple. Reduce industrial pollution of air, land, seas and rivers. Replant trees and use forests and mineral resources

more wisely. Experience has shown that where anti-pollution measures have been taken the results have been visible, spectacular and convincing. The Clean Air Act and the campaign to keep the River Thames clean in Britain, for example, have helped reduce fog and dirt over the British Isles and bring life back to the Thames: in the space of 16 years fish have begun to reappear in a river that for almost a century was lifeless. These successes have been achieved because the will existed in the government, parliament and people. That will is now more than ever before needed on a global level as industrial pollution of the atmosphere reaches alarming proportions.



### Logging in the Ivory Coast

*Twelve million hectares of forests disappear every year in the world. We are moving towards a real ecological disaster if nothing is done*

International cooperation is imperative because the atmosphere and the seas, at least, are the property of all nations: air, wind, fish, etc. have no boundaries. It is reassuring, though, to note that the international community is fully aware of this necessity and has been acting accordingly. Countries are entering into bilateral, multilateral and regional agreements on the environment. In Europe, laws and rules have been made at national and Community levels on industrial pollution of air, rivers, seas, on toxic waste disposal on land, on lead content of petrol, on wildlife protection, etc. Canada and

the United States have been examining jointly ways and means of controlling industrial pollution across boundaries and combating acid rain. The United Nations Environmental Programme, on the other hand, is increasingly working towards global cooperation on the environment. It is, for example, compiling an international register of potentially toxic chemicals in cooperation with the Food and Agricultural Organization (FAO) and drawing up a convention on the use of chlorofluorocarbon to be signed by all nations later this year. It has been demonstrated that chlorofluorocarbon pollution can be reduced and eventually eliminated. In 1973, for example, when a number of governments decided to cut back on the production of chlorofluorocarbon 11 and 12, there was a drop of 18% in the use of the product in a space of six years. A global ban on the use of chlorofluorocarbon is necessary. The existence of relatively cost-effective substitutes as aerosol propellants should make this possible.

The overwhelming size and nature of industrial pollution coupled with the many powerful economic forces at work mean that, short of iron determination to implement various laws, conventions, rules and guidelines, the battle to keep the earth's stratosphere, our atmosphere, land, seas and rivers clean will be lost. The onus of safeguarding our life-supporting systems lies with the industrialized nations who are chiefly responsible not only for the pollution of our planet but also for the over-exploitation of our natural resources. Furthermore, they have the scientific and technical knowledge and financial resources to limit the damage, if necessary.

In the coming years, Third World countries will be told more and more (if they are not already convinced) that they must follow a different pattern of development from the industrialized world. Humanity must learn to renew those resources that are renewable and manage wisely those that are not. Forests must be regenerated, fish stocks conserved, wildlife protected, mineral deposits carefully managed and all kinds of pollution—of air, land, seas, and rivers—must be considerably reduced. The alternative is doom. ○

AUGUSTINE OYOWE

# Towards an environmentally sound development

by Jon TINKER (\*)

**A great deal of development in the Third World — perhaps most of it — does not work. It is quite simply a waste of money, because it is not environmentally sound, and is therefore not sustainable (1).**

The reason is a continuing lack of understanding about the links between population, resources, environment and development. This article concentrates on four main points:

— first, that non-sustainable, environmentally unsound development hits hardest at poor people in poor countries;

— second, that environmental degradation—damage to the soil, the rivers, the forests—can be a major cause of political and military instability, leading maybe to revolution, perhaps war;

— third, that woolly-minded enthusiasm for “alternative technology” or “green energy” can be just as harmful as unthinking support for pesticide factories or nuclear power stations;

— fourth, that there is an urgent need for much more public understanding and popular debate on these issues, in both North and South. The issues cannot be resolved just by changes to donor or recipient government strategies, made by a few development experts in closed meetings. That is a recipe not for ending the mistakes, just for making different mistakes.

Many of the arguments involved have been well set out in a recent report from the Nordic Council, “Environment and Development Assistance” (Miljö och Bistånd). The thinking this report represents has already had considerable impact on the aid policies of the four Nordic nations, of the Netherlands, of the European Community and of other bilateral donors. It argues that development aid ought to be more sustainable, of more value to the peoples of the South, and

thus of more value to the taxpayer in the North.

In the present world slump, aid and development budgets are unlikely to increase, and may well continue to fall in real terms.

This apparently gloomy prospect offers an opportunity, in that both developmentalists and those who would really like to cut development assistance could be united in making existing aid more cost-effective. In the long-term—and in the Third World this may be as little as five years—development that is not sustainable is not cost-effective. Too many projects

achieve their “project objectives” (any competent bureaucrat can, after all, draft objectives which are sure to be reached) without making any significant contribution to genuine development.

We all need to encourage a much more ruthless analysis of the real benefits—if they are there—of development activities. For example, a forthcoming Earthscan publication will document the way in which land is still being lost on a massive scale to waterlogging and salinisation because of the failure to install and maintain ade-

quate drainage. Yet new irrigation schemes are still regularly structured in ways that make salinisation almost inevitable.

It is sometimes argued that a concern for the environment is a luxury for rich nations, something the Third World cannot afford. This is nonsense, but one can understand why some people in the South believe it to be true. When we in the North talk about environment, people in the South often suspect that we simply want them to protect wildlife and establish national parks, and that all we really mean by development is building hotels so that rich white tourists can come and photograph lions.

But environmentally-sound development is not really about wildlife at all, important though wildlife may be. It is about development, and whether or not this development works. If development is environmentally unsound and non-sustainable, if it damages and destroys the forests and water and soil and clean air, then it is bad development, development that will



FAO/UNICEF

**A starving child in the arms of his father in Somalia.**  
*An environment hostile to agriculture is partially responsible for his plight*

(\*) Director, Earthscan International Institute for Environment and Development.

(1) This article is based on speeches delivered to recent conferences of Redd Barna (Norwegian Save the Children Fund) and of the Swiss Directorate of Development and Humanitarian Aid (DDA).



not work. And phoney development of this kind hits hardest at the poor.

### Water, forest, land

Take water. If Third World rivers, streams, pools and lakes are polluted, by pesticides or industry or sewage, it is the poor who are poisoned or who suffer from diarrhoea. The rich have their own taps, filters, purifiers, private wells. They often pay far less per litre for their piped municipal water than the poor, who have no alternative but to use increasingly contaminated sources to wash, to drink and to cook with.

Take forests. If there are few trees left, the poor must walk further and further—to gather firewood. Even in this age of petroleum and nuclear power, firewood is still the main energy supply of one human in two.

Take land, perhaps the most fundamental natural resource of all. When it is damaged, polluted, washed away in the rain or blown away in the wind, it is the poor who are pushed onto ever more marginal land, too barren to cultivate, or too steep or too swampy to build a decent home.

Environment is *not* a matter for the rich. It is, first and foremost, a matter for the poor. Consider, for example, a common development project: a big dam, built to irrigate soil or to generate electricity. Too often, the mountain slopes of the watershed above the reservoir are deforested soon after the dam is built. On many tropical soils, this causes rapid soil erosion. The dam itself begins to fill with silt. The electric turbines become clogged with sand, and the capacity of the reservoir is reduced.

Protecting watershed forests is not a matter of saving rare ferns or unusual species of monkeys (although these things are important, not least as indicators). Rather is it a matter of simple economics, of ordinary good engineering. A dam half full of silt does not generate much electricity. Yet hundreds of millions of dollars are still spent, again and again, on Third World dams whose economic lifetime will be dramatically shortened by soil erosion.

In Paraguay recently, as part of the huge international Parana River de-

velopment, labourers on one big dam were largely paid by being given free land grants in the forested catchment area upstream. The results are predictable, but will no doubt be regarded as surprising and regrettable when they occur.

Soil erosion occurs on a large scale in the Himalayas, very often the direct result of other deliberate development activities such as timber concessions and road-building. Consequently, the great river basins of the Indus and Ganges have become badly silted. Instead of flowing steadily all year, most rivers now flood after the monsoons, and run nearly dry in between.

New dams must be built to control rivers which once controlled themselves. Even so, floods in India kill thousands of people and cause damage costing hundreds of millions of dollars almost every year. Silt deposited in the delta of the Ganges in Bangladesh causes yet more floods, and rivers which were once navigable must now be continually dredged.

The situation is similar in China, where floods on the Yangtze in 1981 and 1983 only just missed causing immense loss of life. The root cause of this flooding, say Chinese scientists, is deforestation and erosion 1000 kilometers (620 miles) and more upstream, in the mountain regions of Sichuan. The deforestation dates from Imperial times, but has accelerated since the Revolution.

### Deforestation

Deforestation has three main causes. Firstly, there is the impact of the timber industry. To take the extraordinary biological wealth of a tropical rainforest, the hundreds of species of trees, each with its unique characteristics as a timber, and turn them into wood chips to make paper or building boards is unbelievably short-sighted.

It is similar to the lunatic way we take the complex mixture of hundreds of organic chemicals in petroleum, and instead of using them in the petrochemical industry, simply burn them to extract their energy. It is like taking the books from a fine scientific library and using them to fuel a stove. Hopefully we can develop more intelligent ways of using tropical forests (and pe-

troleum) before the planet's reserves of both are exhausted.

Where tropical forest is cleared for large-scale agriculture, the results have rarely been happy. The soils on which most rainforests grow are poor and infertile, with 95% of their nutrients held in the vegetation. Once the trees are gone, crops can often only be grown, or cattle grazed, for a very few years before yields drop so low as to be valueless.

Large-scale clearance of forest, for timber or agriculture, can usually be controlled by government action, if the political will exists. The clearance of thousands of tiny plots of land, by thousands of peasants with nowhere else to go, is much less easy to stop.

There are two different forms of shifting cultivation in the tropics, which are often confused. For generations, native forest peoples have followed a traditional lifestyle, clearing a small patch of forest, farming it for three or four years, then abandoning it to the jungle. Provided each tribe has a large area of forest to inhabit, this process can continue indefinitely.

But today, around the edges of the great rainforests of Latin America, Africa and Southeast Asia, and especially along the margins of the new roads that are driving into them, a new form of shifting cultivation has emerged. Land-hungry people clear a few hectares, farm them until the land is exhausted, then move on to another patch. Each time, they find somewhere less and less suitable for permanent farming: steeper slopes, thinner soil, harder work, lower yields. And they leave behind them land which will probably never be productive again.

These marginal peoples on marginal lands are destroying their own environment. They do so not through stupidity or short-sightedness, but simply because they can see no alternative. They must dig up the steep slopes, even if they know the next heavy rain will wash their soil into the stream, because there is no decent flat land available.

The island of Java has been farmed continually for thousands of years, and its elaborate system of rice terraces is one of the finest examples of sustainable intensive cultivation in the world. But some land was always left un-

touched: steep slopes, ravine edges, the margins of rivers, the mangrove swamps. Today, the inexorable pressures of a rapidly growing population mean that more and more of this marginal land is being cultivated. It cannot be used for long, because it erodes, or is colonized by a tough grass called *alang-alang*, which no livestock will eat. The result is that parts of Java today have become as unproductive as any desert.

The world's dry regions face similar problems. In the Sahel, along the southern edge of the Sahara, the better agricultural land is increasingly taken up by cash crops for export: cotton or peanuts. Subsistence farmers—and as the population grows there are more and more of them—are pushed off the best land into areas where rainfall is lower and the soil is too dry for permanent cultivation. Millet or sorghum can be grown there, with difficulty, for a few years. But yields drop off rapidly, the soil loses its humus and becomes dry and dusty. If—or rather, when—the rains fail, the soil just blows away in the wind.

The subsistence peasants of the Sahel in turn push the nomadic herdsmen right into the edge of the desert. There are more nomads now, too, and their herds are bigger. The sub-desert pastures are over-grazed, and when drought comes again—as it has in 1983 over most of sub-Saharan Africa—the sparse grasslands can be grazed and trampled into loose sand. The process is the same as in the Himalayas or in Java: more and more people pressing on a limited resource base. Just in order to survive, they are forced to destroy the soil on which their own future depends.

The third cause of deforestation, after the timber industry and clearance of land for agriculture, is collecting firewood. Women gathering fuel rarely have much effect on real forest, but once most of the trees have gone, those that remain are increasingly at risk.

Foresters in West Africa, planting neat rows of exotic species, speak contemptuously of the *brousse inutile*, or useless bush. Sahelian peasants, wiser in the art of surviving in an unforgiving environment, have a better knowledge of the value of trees. They use



EARTHSCAN Marcos Santilli

*Despite their importance as ecological buffers, forests are being widely devastated by clearance for agriculture, logging, firewood and for road construction*

them for nuts and fruits, leaves to feed livestock, bark for dyes or tanning leather, berries for medicines, or just to provide a patch of shade. But if there is no other source of fuel to cook the daily meal, the remaining trees in densely populated areas will all eventually disappear.

When Columbus first saw the Caribbean island of Hispaniola, he described it as “filled with trees of a thousand kinds, so tall they seem to touch the sky”. Today, Haiti covers most of Hispaniola, and Columbus would not recognize it. The trees no longer touch the sky. In some districts, 50% of the soil is eroded down to bare rock. Nearly every big rainstorm washes mud down into the streets of the capital city, Port au Prince. Siltation has halved the effectiveness of the Peligre Dam, which represents half Haiti's hydroelectric potential.

The same is true in most of the Caribbean islands and Central America. Jamaica issued postage stamps towards the end of the colonial period which described it as “The Land of Wood and Water”. Not any more. As in Haiti, the woods have mainly gone, and the streams now alternate between floods and drought.

### **Poverty, revolutions and the superpowers**

As populations grow and the environment deteriorates, so poverty deep-

ens and desperate people search for a way out. For Jamaica, one result was emigration, first to Britain and then to the US. Today, one Jamaican in five lives in the United States.

Jamaica's was an ordered and peaceful emigration. From Haiti, hundreds of thousands, perhaps as many as a million, fled illegally to other islands and to the United States. Some were probably political refugees, escaping the vicious dictatorship of Baby Doc Duvalier. But most were *environmental* refugees, leaving an island whose ecological base has been so damaged that it can no longer support its growing population — even in the poverty and misery for which Haiti is famous.

Haiti has produced environmental refugees. The Central American mainland is now beginning to produce environmental revolutions, and now, ominously, environmental wars.

What are you to do if you are poor and landless; if there are no jobs in the cities and no soil in the countryside; if all the best land is given over to cotton or bananas, and owned by a few rich families or multinational corporations; if all the poor land is already occupied and reoccupied by other peasants nearly as poor as you are; if every year there are more and more of the poor and landless; if any attempt at peaceful political change is ruthlessly suppressed? In these circumstances,

is it surprising that many turn to revolution, armed uprising, guerilla movements?

In Central America, the two superpowers, directly or through their client governments, have been turning into an international military crisis something whose fundamental causes are largely environmental. Present United States involvement in Central America started in El Salvador, where the US is assisting the government in a civil war against peasant-based guerillas.

A 1982 report prepared for USAID on El Salvador writes of "almost complete deforestation, massive soil erosion and loss of soil fertility, siltation threatening hydropower developments, large-scale extinction of flora and fauna, diminishing groundwater resources, deteriorating water quality and widespread health-threatening environmental pollution... The majority of Salvadorans are hungry, illiterate, infested with parasites, malnourished, poorly-housed, underemployed and have little opportunity for self-improvement".

The report concludes that "the fundamental causes of the present conflict are as much environmental as political, stemming from problems of resource distribution in an overcrowded land".

How many other countries, how many other revolutions and refugee problems, how many other civil wars and superpower confrontations will deserve the same verdict over the next decade?

Much of the Indian subcontinent, most of sub-Saharan Africa, the Caribbean, Central America and the Andes are all on the verge of ecological collapse, moving rapidly into a deepening downward environmental spiral.

It begins with more and more people causing growing pressure on natural resources, on soil and water and trees. The results have a depressingly familiar ring: falling agricultural yields, landlessness, less clean drinking water, increased scarcity of fuelwood, worse nutrition, more disease, higher infant mortality, and deeper and deeper poverty.

Finally, to complete the circle, the district, the country, maybe whole regions become unable to support to-

day's population, let alone tomorrow's.

The consequences are immediate, practical — and generally ignored.

### "On the side of the future"

Regional ecological collapse is not just an environmental disaster. It is also a direct threat to the self-interest and security of all the rich, industrialized nations.

Most governments in the North are concerned about political and military stability in one or other region of the Third World. This may be nearby, like the US in Central America or the USSR in Afghanistan, or it may be an ex-colonial region. Or it may be a market for manufactured goods, or a region that supplies oil, uranium, minerals, rubber, coffee or other raw materials.

A 1981 report from a Canadian House of Commons committee, dealing with Canada's relations with Latin America and the Caribbean, neatly clarifies some of the issues. "We must distinguish quite clearly between two different but frequently confused terms — the status quo and stability. Whereas the former frequently entails a rigid and repressive defence of existing social structures, the latter rests on consensus and the opportunity for change... Canada has a special obligation and opportunity to stand on the side of the future".

### Environment and security

Sadly, few Northern governments succeed in distinguishing between stability and the status quo in the South, and frequently protect their real or perceived interests by repressive political or economic measures, often by arms supplies, and sometimes by direct military intervention. But they almost always totally ignore the environmental factors.

Environment in the Third World, if we continue to ignore it, will more and more often become a military issue. We urgently need much more understanding of the links between environment and security.

How can we prevent the degradation of a country's natural resource base from leading to social unrest, political turmoil, revolution and perhaps

war? US environmentalist Peter Thacher, former deputy head of the UN Environment Programme, put it particularly starkly at the World National Parks Congress in Bali in 1982: "The ultimate choice is between conservation and conflict. Trees now or tanks later. The choice for governments is either to find the means by which to pay now to stop the destruction of the natural resource base, or to be prepared to pay later, possibly in blood".

If so much development is not environmentally sound, then how do we encourage development which is sustainable? It is not all that easy. If Norway or Switzerland were a poverty-stricken developing country, and aid missions from Senegal or Botswana flew in to improve European agriculture, how well would they succeed?

According to UN Development Programme administrator Bradford Morse, Africa is currently blessed with 40 000 development experts, at a cost to someone of around four billion dollars a year. When one considers the relentless fall in food production per capita over the last few decades in sub-Saharan Africa, in spite of these tremendous injections of advice and assistance, it is hard to feel total confidence in these expatriate experts.

How can development assistance agencies do better in future? They could start by:

- checking out the real effects of development, not making ideological assumptions about what they think they ought to be;
- remembering that people are different: something which works in Kenya may be quite unacceptable to India;
- widening the debate on development, both in the North and in the South, to involve more and more people.

### Biogas

Consider biogas: you collect cow dung, mix it with water, put it into a big tank, and it gives off a gas, mainly methane, which can be burned as a fuel. It sounds a wonderful example of green energy and of appropriate technology. So, in many ways, it is. In the Sichuan province of China, there are said to be six million biogas digesters.



### A traditional cooking method in West Africa

*"Take one of the new, improved cook-stoves, efficient but not very strong, and try to pound wet grain on its. It will collapse"*

Great things were expected of biogas in India, where millions of "sacred" cows are said to leave their dung lying in the streets. But what happens when a biogas plant is built in an Indian village? It is not owned by a commune as in China, but by a private person. The steel cap to the digester costs \$50 or more, which only the rich farmers can afford. These same people own most of the cows; when they buy a biogas plant they often instruct one of their employees to collect the dung and bring it back to the digester.

But that cow dung, previously, was not wasted. It was collected by the children of the poor, shaped into cakes, dried in the sun, and burned as fuel. Now, the poorest people in the village (and the poorest people in an Indian village are very, very poor) have lost their free fuel supply. There is no firewood available; they cannot afford electricity or kerosene; so they must now collect twigs, crop stalks and dead leaves to cook their meal.

How appropriate, how green, is biogas when its introduction means depriving the poorest of the poor of their cooking fuel? How environmentally sound is it, when it means that even dead leaves and stalks are burned, no longer returning organic material to the soil?

### The cook-stove option

Burning wood in an open fire is inefficient: well over half the heat is said to be wasted. So aid agencies have recently become interested in improved cook-stoves. But how much use are they? An Earthscan study on cook-stoves (2) reaches some unexpected conclusions.

The Mossi people of Upper Volta cook a staple dish called *tö*, in which millet is boiled, and then pounded with a huge stick. This works well with enormous traditional cooking pots, standing securely on three massive stones. But take one of the new, improved cook-stoves, efficient but not very strong, and try to pound wet grain on it. It will collapse. In other words, some of the new cook-stoves are *not* appropriate for the Mossi people of Upper Volta, because they cannot cook *tö* on them. And if they cannot cook *tö*, the women just won't use them.

In much of East Africa, which is much cooler than Upper Volta, cooking fires are inside huts, where they serve many other functions besides cooking. They give light and heat in the evening. They are a social focus; people sit around them, watch the

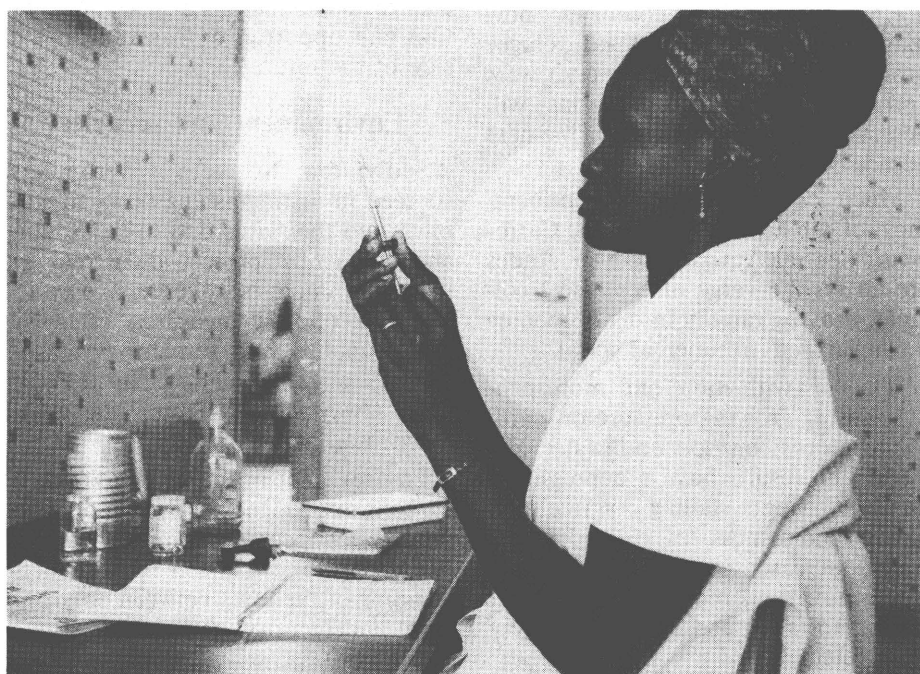
(2) "Stoves and trees", by Gerald Foley, Patricia Moss and Lloyd Timberlate, price £3.50 from Earthscan, 10 Percy St., London W1

glow, and talk. The smoke drifts around the hut, keeping biting and disease-bearing insects away, and goes up into the roof of the hut, where maize and other food are stored, protecting the larder from insects and decay.

A new, improved cook-stove usually gives no light to talk by, no smoke to keep away insects. Rural Kenyans, like rural Upper Voltans, will not use a stove that does not satisfy their real needs, even though it may be much more efficient, thermodynamically, in the laboratory in converting firewood into heat for cooking. (In fact, while in the laboratory the new stoves often do use less fuel than an open fire, tests in people's homes suggest that the fuel saving there is often almost non-existent).

This emphasizes that options like this do not provide a magic answer, and that they are not bound to work just because they are "green". In some places and circumstances they are useful, in others they are not.

Development must also be considered in relation to the traditions and skills of the people concerned. For example, there is a long tradition of rice cultivation in Southeast Asia, where peasants work standing in the water, harvesting two and often three crops a year. In the Sahel, hundreds of mil-



### A nurse in a hospital in Burkina Faso

*"The number of taps might be a better measure of public health than the number of hospitals"*

lions of dollars have been spent introducing irrigated ricefields along the Niger river. They have been an almost complete failure. Nowhere have even two crops a year been regularly harvested, and the fields usually become waterlogged and useless through failure to maintain the drainage systems.

Do the Sahelians not have the management capacity to deal with rice, or the technical ability to maintain the drains? Or does the Sahelian peasant just not like getting his feet wet? Whatever the reason, the fact that Sahelians won't grow rice may be just as much a development reality as the fact that the Sahel has a fairly low rainfall. Certainly, it makes no sense to spend more aid money on irrigated rice projects until someone has managed to make the existing schemes work.

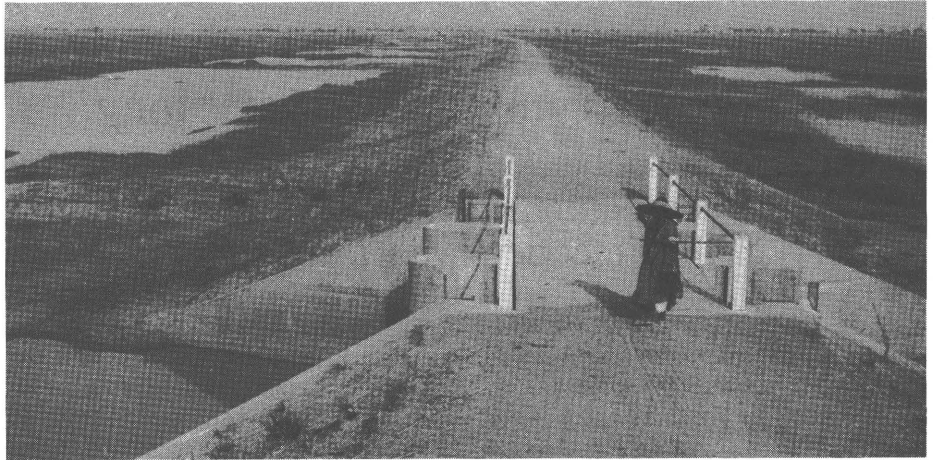
### Development and environment

The need to look at development in its environmental context, which, above all, means in the context of the people whom the development is meant to benefit, is illustrated by the issue of water and sanitation.

Traditionally, the number of hospital beds per hundred thousand people has been regarded as a fairly good measure of public health services. In 1980, when the World Water Decade was launched, Dr Halfdan Mahler, director-general of the World Health Organization in Geneva, suggested that the number of taps might be a better measure of public health than the number of hospitals.

There was some truth in this; water-borne diseases kill 30 000 children every day, and are probably responsible for 80% of all the illness in the world. Clean, uncontaminated water is rightly regarded as one of the main objectives of development policy. But clean water alone does not eliminate water-borne disease. Germ-free water does little good if it goes into a contaminated environment. If you collect clean water and put it into a dirty pot; if your hands or clothes are contaminated with faeces; if your home is insanitary — then clean water alone will not bring good health.

To get less disease, you have to combine the clean water with better sanitation, proper primary health care, and a generally cleaner environment.



**An irrigated rice project in Mali**

*"It makes no sense to spend more aid money on irrigated rice project until someone has managed to make the existing schemes work."*

And a recent Earthscan study on two Indian villages showed that other steps such as providing soap, or shoes as protection against hookworm, or some means of disposing of the blood-stained rags used in childbirth and menstruation, would probably have a bigger effect on health than clean water or latrines. The same report also showed that the villagers had a low awareness of waterborne disease; they disliked chlorinated water for its smell and taste, paying little attention to its purity.

### Earthscan's main aim

The main aim of Earthscan is to help make the world's press, non-governmental organizations, decision-makers and the public more aware of the links between environment, development, resources and population.

This is not a matter of issuing propaganda, but of helping Third World journalists, newspapers, environment societies, women's organizations, schools, trade unions, businessmen's groups and so on to become better informed about the issues; to make their own analysis of the problems of their own countries; to become better equipped to issue their own publications and inform their own people.

Most Western aid agencies are now moving towards making their development aid more environmentally sound and sustainable. But none is yet doing enough to help strengthen the ability of Third World nations to become more environmentally aware: to help them ask the right questions.

This is difficult to do without seeming to interfere in internal politics, so is probably better done by non-governmental organizations. Earthscan's experience in this task is now extensive, and we have recently agreed with aid agencies of Denmark, the Netherlands, Finland, Norway and Sweden a major expansion of our programme of Third World institution-building, so they may produce more of their own articles, press releases, pamphlets, books and reports. We aim to help more key people in seven East African and South Asian countries, in the media, government, unions, industry, environmental and development groups, to ask the right questions.

There is an urgent need for much more public understanding, in both North and South, of the crucial issues. Just changing policies at government level will not end the mistakes. It will merely ensure we all make *different* mistakes. Without a much more intense debate about sustainability in developing countries themselves, the shift in emphasis which is taking place in the development agencies will have little real effect.

Barbara Ward invented the phrase "Only One Earth" at the time of the Stockholm environment conference in 1972. We all live on the same small planet. As we continue to damage it, to reduce its capacity to support our species, we destroy our own future. Let us not believe that the North can long isolate itself from soil erosion in El Salvador, from desertification in Chad, from famine in Ethiopia or from disease in Bangladesh. ○ J.T.

## Excessive demands on our environment cannot be sustained for very long, says Dr Mostafa Tolba, Executive Director of the United Nations Environment Programme in this interview with *the Courier*

► *Dr Tolba, is concern for the environment really compatible with development imperatives? What would you say to those who see this as likely, one way or another, to slow down the economic development of the Third World?*

The still widely held belief that there is a conflict between development and environmental quality is an illusion. There is no doubt that businessmen tend to over-estimate the costs of environmental regulations, and environmentalists to over-estimate the benefits, but we certainly do not have to make a choice between the two.

Indeed, the primary aim of environmental management is to ensure that economic development and the conservation of natural resources are pursued as goals of equal importance. Twenty years ago, it is true, it seemed to all but the most enlightened that to have development meant paying the price of a loss in environmental quality. But today we realise that environmental protection yields significant economic and social benefits—more than that, development actually relies on a ready supply of natural resources and, ultimately, our very survival does too. Excessive demands are already being made on the environment's limited resources and on the carrying capacity of its fragile ecosystems—deforestation, desertification and soil erosion are only a sample of the outward signs—which is bad news for developers.

Such over-exploitation cannot be sustained for very long. If we misuse our resources today, there will be none left for the process of development in years to come and, given their heavy reliance on renewable resources, this message has particular relevance to the Third World countries.

There is plenty of evidence from all over the world that an investment in

environmental protection pays handsomely. In industrialized countries, apart from the practical advantages of pollution abatement, reforestation programmes or other conservation activities, there is the added bonus of creating new jobs. In France, for example, as a direct result of environmental policies, 370 000 new jobs were created in 1979 alone.



Dr Mostafa Tolba

In developing countries, the results of environmental management can be even more dramatic, in practical terms. In the Sudano-Sahelian region of Africa, a band of 19 countries from Kenya to Senegal, current subsistence farming techniques are incapable of supporting today's population of 236 million on a sustainable basis. But a recent UN study has shown that, with a moderate level of farm inputs and some simple conservation measures, the region could easily support the population of 406 million, which is expected by the year 2000.

So, far from slowing down the economic development of the Third World, a concern for the environment can actually assist it — development

in the long-term can only be achieved through sound environmental management. That is why UNEP's consistent plea since its establishment in 1973 has been "development without destruction" because without conservation you cannot have development, and without development you cannot have conservation.

### The threat

► *How serious is the environmental degradation of our planet?*

Very serious. Incredible though it may seem, an area almost equal to the size of North and South America combined has already turned to desert, and a further 60 000 square kilometres is added every year. 850 million people are suffering as a result, many of them chronically underfed and malnourished. Tropical forests are being destroyed at a rate close to 12 million hectares every year — and going with them are their irreplaceable genetic resources. The industrial complexes of Europe and North America between them pump a staggering 100 million tons of sulphur dioxide into the atmosphere each year, which eventually falls as acid rain thousands of kilometres away. 25 000 flowering plants and over 1 000 vertebrate animal species are threatened with extinction — many more have already become extinct.

I could continue citing examples of man's destructive influence on the environment almost ad infinitum — the environmental degradation of our planet is very serious indeed. What is particularly worrying is that, by the turn of the century, now less than 20 years away, the problems we face today will be insignificant by comparison, if the current trend continues. And ultimately, of course, it is man who suffers.

► *What areas now call for urgent action?*

Every aspect of environmental destruction calls for urgent action, so to select specific areas is very difficult. Obviously some countries, or groups of countries, have different priorities from others, and even my colleagues at UNEP have differing views about which are the most pressing and urgent matters.

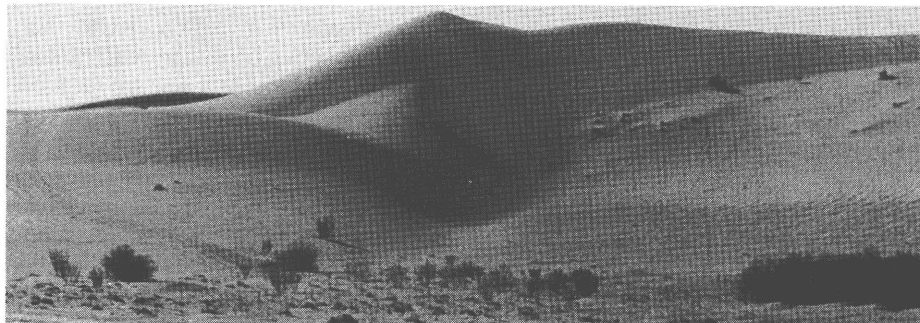
Destructive coastal development, desertification and soil erosion, tropical deforestation, atmospheric pollution and, of course, unchecked population growth are certainly amongst the forerunners. But, perhaps more than anything else, the biggest hurdle we have to overcome—and soon—is the lack of awareness of environmental problems and their significance. Environmental management and conservation are impossible without the understanding and enthusiasm of individuals, industries, governments and the international community as a whole. That is why I believe UNEP's 'catalytic' role to be so important: to initiate, stimulate, support, complement and accelerate action at all levels of human society and on all issues of environmental concern. We have made considerable progress in this field in the last decade, but still have a very long way to go.

### The need for international cooperation

► *Do the developing countries and the industrialized world face the same kind of environmental problems?*

Some countries are fortunate enough to escape many of the major international environmental problems which plague other parts of the world, or which are a cause of major concern elsewhere. The United Kingdom doesn't have to worry too much about desertification for example, while Sudan doesn't have the UK's problem of wetland drainage. In other words, every nation has its own specific environmental problems, which may or may not be the same as those of its neighbour.

Having said that, many environmental problems are shared by the whole world. These, and the management of common resources such as the atmosphere and the oceans, affect developing and industrialized countries alike. Few of our endangered great whales live in the waters of only one country, for example; sulphur dioxide emitted in one place is often transported on the winds of the upper atmosphere and falls as acid rain thousands of kilometres away; international trade in wildlife and its products potentially involves every country in the world; even marine pollution in the Mediterranean can only be dealt



**The Kalahari desert in Botswana**

*"An area almost equal to the size of North and South America combined has already turned to desert"*

with through the cooperation of the 17 nations which are around it.

One of the main lessons we have learnt in the past 10 years is that the world environment is interconnected, so that neglect or positive action in one quarter can have repercussions in another.

International cooperation is therefore paramount and increasingly, these days governments are realizing this. We are now witnessing some dramatic partnerships between otherwise mutually hostile nations, even while their guns are firing, to find common solutions to common environmental problems. But above all it is the developing countries and the industrialized world which must work together — they rely on each other's consideration for the future.

► *What progress has been made on conservation, in nearly fifteen years of environmental movements? How useful has UNEP been in the campaign?*

First of all, of course, the environmental movement has been around for much longer than 15 years. UNEP is one of the younger environmental organizations, little more than a decade old.

It would be true to say, however, that more progress has been made in those years than ever before. This has particularly been the case in two areas: environmental awareness and ecological research. A great step came with the publication of the World Conservation Strategy, which provided decision-makers with an overall blueprint for exploiting their environments sustainably.

But I should add a word of caution. Governments have not always matched these advances with deeds. The concepts for ecologically sound

management have been imperfectly or too slowly applied — or ignored entirely.

The inevitable consequence is that, despite the successes we have had, on virtually every front there has been a marked deterioration in the quality of our environment. At one time, the world was large and the people few. Today we need more of everything, to feed an ever-growing population—more housing, more shelter, more food, more jobs, more fresh water—and the planet's capacity to meet those needs is still being undermined.

So while we have made considerable progress in some areas, the overall effect is that we have already exhausted some of our options, and our room for manoeuvre in other areas has narrowed considerably in the last 10 or 15 years. There is no doubt that circumstances will become bleaker still over the next decade if we continue the trends we have begun.

As far as UNEP's role is concerned, I believe it to be a combination of the different activities and approaches of all organizations in the environmental movement which gets things done. Every organization, governmental and non-governmental alike, has its part to play.

Due to the limitations imposed by the catalytic role bequeathed to UNEP by the Stockholm Conference in 1972, it is difficult for us to take direct action, and so it is often difficult to assess in graspable terms our major achievements. We cannot establish a reserve, stop a factory from issuing effluents, or pay for anti-poaching operations. Our job is to jog the world into action, to set it working for itself. We maintain a constant watch on the changing state of the environment, analyse trends and assess problems,

and then promote the necessary action plans and projects to put them right.

At the end of the day, when the time comes for giving credit, UNEP is frequently overlooked. But, in fact, we have often had a major role to play in 'laying the foundations' which make direct action by others possible.

I believe UNEP has played a particularly important part in stimulating environmental awareness in government circles. It is satisfying, for example, to see the rapid increase in the number of environmental government ministries in recent years; the explosion in national environmental legislation; the measures now being taken by nearly 40 governments to implement the World Conservation Strategy; and the willingness of governments to participate in international treaties protecting the environment, our Regional Seas Programme, INFOterra, our Global Environment Monitoring System (GEMS) and the International Register of Potentially Toxic Chemicals (IRPTC).

### International laws

► *The need for a global approach to environmental problems is widely recognized. But, given the powerful economic forces at work, how effective can international environmental laws be? How best, in your opinion, can such laws be enforced, bearing in mind, for example, that the Law of the Sea Convention, which makes reference to the environment, has not been signed by those countries whose adherence is crucial for the application and success of any international law?*

Although, as you say, the need for a global approach to environmental problems is widely recognized, such

an approach can often work best through a series of integrated regional networks, so long as they are globally coordinated. Many environmental laws work on this basis, such as UNEP's own Regional Seas Conventions and Protocols, which now cover most of the world's marine regions and are complementary to ongoing global efforts at law-making.

The effectiveness of these efforts depends on many factors. Firstly, there are different kinds and levels of environmental law, all of which depend for their implementation on acceptance not only by governments but by individuals and social groups as well. One type takes the form of strict inter-governmental treaties, such as the Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora, which now has a worldwide membership of 87 countries. Another type, sometimes referred to as 'soft law', may take the form of non-binding guidelines or principles which nevertheless can become widely accepted as a basis for national legislation and standards. UNEP has been involved in the initiation, drafting and implementation of many examples of both types of environmental law, and has assisted governments in strengthening and improving their own laws in this field.

Inevitably, the interplay of economics is an associated, and particularly important, factor. UNEP has always aimed at involving not only governments but also concerned civilian groups and interest groups in the implementation of environmental law. Indeed, such laws can often only be effectively implemented with the active cooperation of the powerful industrial sectors which it seeks to regu-

late.

One recent example is the "provisional notification scheme for banned and severely restricted chemicals", recommended in March 1984 by a UNEP Working Group of legal experts. The chemical industry has pledged its full support. Through its Industry and Environment Office, UNEP is now preparing the World Industry Conference on Environmental Management, to be held in Versailles in November this year. It will assemble some 300 high-level participants from industry, business, government, labour, parliaments and international organizations, to discuss ways and means of promoting a more open and more fruitful dialogue with respect to industrial environmental problems. This is a major step in gaining the understanding, cooperation and confidence that is so important.

But these are not so easy to obtain. The World Conservation Strategy and the World Charter for Nature testify to the global consensus that now exists on how we should go about tackling environmental problems. But the will to apply this kind of blueprint and the knowledge that goes with it, is still widely lacking.

What is so astonishing is that governments continue with their wasteful and destructive development policies. They are self-destructive policies, which have already begun to destabilize the world economy and pose a tangible threat to the security of nations. The root cause of our environment crisis is that too many governments and people still tend to take this planet's threatened living and other renewable resources for granted. ○

Interview by A.O.

## Avoiding a "silent spring in a desertlike world"

Mr Muntingh is a member of the European Parliament. A great lover of nature and an ardent advocate of the protection of the environment, he is the Chairman of the ACP-EEC Joint Committee on the environment, which recently adopted a number of recommendations in a resolution to ACP-EEC negotiators of Lomé III with the aim of ensuring greater emphasis on the environment in the new Convention. Is his Committee not asking for too much at a time when many see the main development objectives of Lomé I and II as not having been achieved? Mr Muntingh replies to this and other questions in this interview.

— In no way is my Committee asking for too much. I think that one of the main reasons of poverty, of the incredible situation which we face all over the Third World is largely due to the destruction of nature. Why, for example in the north-west of Brazil at this moment is there such an incredible shortage of food and water? It's because they destroyed their natural environment. Why, for example, do we have in India, China, Indonesia, Bangladesh, a near permanent situation of floods and overflowing of ar-



cas? It's because of the destruction of nature. Why, for example, is there a large number of people in Africa who don't have enough food? It's because they have destroyed much of their environment. So, if we are asking for greater attention on the environment, it is because we feel that it is just one of the main things we have to do to ensure that people survive, because what is destroyed is destroyed, it will never come back. If we continue this way the result will be for Africa, for example, and I quote Commissioner Pisani, "total destruction of Africa".

### The Convention and the environment

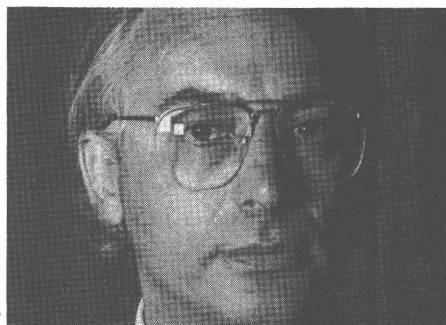
► *Are you saying in effect that lack of concern for the environment was partially responsible for the relative ineffectiveness of Lomé I and II.*

— I wouldn't say that, although aid given under Lomé II has sometimes had negative effects on the environment. For example, dams have had negative effects on agricultural lands of the developing countries. Lomé II, on the other hand, has done a lot of good. But again, if I may quote Pisani "If you add up all the aid given by Western countries and by the Community, the total is far less than the economic value of things they destroyed".

► *The ACP-EEC Consultative Assembly adopted a resolution on the environment in Kingston, Jamaica, in February 1983, and, recently the ACP-EEC Joint Committee on the environment, of which you are chairman, also adopted a resolution. How would you like to see these resolutions figure in the next Convention?*

— Well, there are several options. One is to build into every title of the new Convention conditions on the environment. This is what they call a "facet approach" or an integrated approach. The second is a special title on environment and nature. And the third is a specific protocol, for example, on reforestation and anti-desertification programmes and genetic diversity preservation programmes, that is, preservation of useful plants and animals. A fourth possibility is taking one or two of the three possibilities I have mentioned. Now, Commissioner Pisani's approach is the facet approach —

that is integration of provisions on the environment into all the titles of the new Convention. I have the impression that ACP countries prefer a separate title on environment and nature. And my approach, and that of many environmental organizations, including non-governmental ones, is the integrated approach together with a protocol. I think that the best thing to do is to write into all the titles sufficient conditions on agricultural, industrial and mining cooperation, Stabex, etc. Why am I not in favour of a specific title in the new Convention? Because I think that would give many Third World countries the opportunity to avoid giving adequate attention to the things I'm advocating. For example,



Hemmo Muntingh

one of the most important things about the environment in the world today is the preservation of genetic diversity, stopping of the extermination process which is going on at the moment. With the sector approach, ACP States, which are not very much enthusiastic about genetic diversity but more in favour of industrialization, agriculture, mining, etc, will give low priority to it. If, on the contrary, the approach is integrated, ACP States will go on getting financial and technical support for agriculture, industry mining, etc. subject to a set of conditions for the preservation of the environment.

### Plants and animals

► *Your recommendations, of course, are wide-ranging. What specific areas do you feel particularly concerned about in the ACP States?*

— Well, personally, what worries me most is the incredible speed at which plants and animals are becoming extinct at the moment: two plant species per day! There are at least 25 000 species of useful plants and a thousand species of animals on the

verge of extinction. Some estimates say that before the end of this century 700 000 to 800 000 species will be extinct — that means that people who are dependent on these species will no longer have them. As you know, 40% of all production in Europe is of biological background. In the Third World, it is 80%. The Third World is almost completely dependent on plants and animals for their food, clothing, housing and energy and if you exterminate them, (and it's going incredibly fast), at the end of the century, the world will face a disaster on the scale of an atomic war. So, in my opinion, the preservation of plants and animals is of the greatest importance. Secondly, and nearly as important as preservation, is reforestation on a really large scale, anti-desertification and anti-erosion programmes. The problem, of course, is the scale of priority. Are you going to invest the scarce money which you have in large dams which will give a lot of electricity for one town, but which will destroy agriculture, fishing grounds, ecosystems and small villages? Or are you going to give priority to preservation and the fitting of agriculture into the existing ecosystems? I think common sense would dictate that priority should be given to, I would say, small-scale things instead of large factories, industries, big dams and schemes like the CARAJAS project in Brazil which have done enormous amounts of damage to nature, a dam that, after 30 years, will begin to depreciate and whose life span will eventually come to an end.

► *In view of the limited scope of the Convention, are environmental problems not best treated on national and regional levels? Your Committee, of course, has called for measures at these levels but have you figured out any other way, outside the Convention, of ensuring that, at least, at the national and regional levels, actions will be taken?*

— It depends on the situation. Ecosystems don't stop at the boundaries. Therefore, there is a need for a regional approach. The best approach, in my opinion, is the one advocated by the International Union for the Conservation of Nature and Natural Resources, in the "World Conservation Strategy"...

## Budget line 946

► ... Right, but has the EEC-ACP Joint Committee on the Environment figured out how it can persuade ACP governments, outside the framework of the Convention, to pay more attention to the environment?

— We intend to put additional pressure on them through non-governmental organizations in Europe and in Third World and, through the European Parliament, try to provide financial support and incentives outside the Lomé Convention for specific projects. I myself have introduced in the budget, (budget line 946) the possibility of giving support to Third World countries which want to implement the World Conservation Strategy. This budget line 946 should provide opportunities far bigger than there are at the moment, for securing additional financial support for the environment.

► *Government and institutions are one thing and the people another. How best do you think environmental matters can be brought to the awareness of the population?*

— Well, I think it is a question of information and education. People don't realize that the destruction of nature is one of the main causes of poverty and under-development. In the beginning that was not the case. It was capitalism, the old historic reasons. But now it is things like deforestation which give rise to erosion and overflowing and in turn lead to hunger. Governments should be able to show their peoples that destruction of nature means destruction of life. If their peoples realize this they will act.

► *Do you have any reason at this particular moment in time to feel optimistic about the environment?*

— Well, I tell you very, very honestly, I think we have lost the case. I think that before the end of this century, the way things are going and considering the big political and economic interests using nature (Japanese, American, Russian and European), we will have really nothing left. I am afraid that we will end up with what Rachel Carsons described as "a silent spring in a desertlike world". ○

Interview by A.O.

## Environment in the Community's cooperation policy with ACP States

by Robert GRÉGOIRE (\*)

Literally carried away by the rapid growth of the industrialized countries in the middle of the century, the ACP countries began building their development with external aid, particularly from the Community. They concentrated on three things which seemed to account for the success of the great economic powers — priority on industrialization, rapid urbanization and doors wide open to international trade.

So, considerable transport and service infrastructure was set up, industrial and food crops, mainly for export to meet growing international demand, were developed and their minerals, forests and seas were exploited at an ever-increasing rate. However, thanks to the industrial infrastructure that was appearing, more and more of these products and raw materials were processed on the spot.

Needs, in both the ACP States and the rest of the world, were so great and the potential seemed so enormous that the assets of both land and sea were exploited without too much thought as to how this human activity might upset the natural surroundings that had proved more fragile than had been suspected.

Drought in many countries, the international energy crisis and the population explosion in most of the ACP countries, have highlighted this fragility and brought about a real awakening to the seriousness of the problem and the close links that exist between development and a natural environment. This awakening was reflected in the international organizations, in particular, by a series of conventions on protecting the environment—and pursuing development—to which the Community and the ACP States adhered.

And since the end of the '70s, these findings have been very much borne in mind in applying policies both in development and in the ongoing negotiations for the next Lomé Convention.

It was high time this happened, be-

(\*) Principal administrator with the EEC.

cause, at the beginning of the '80s, the environmental situation in a large number of ACP countries was very serious, in spite of the fact that our knowledge in this area tends to be restricted by a shortage of reliable information which prevents us from producing any precise figures.

Deforestation, deterioration of the soil, the decline in water resources and desertification have reached alarming proportions and are a serious threat to living conditions in various parts of the world.

Atmospheric pollution is also a serious threat to the environment, as is the pollution of the oceans and inland waters, the inadequately supervised use of dangerous substances, particularly in agriculture and the extinction of many species of animals and plants. A combination of different factors has even speeded up the rate at which the environment is deteriorating.

For several years now, general climatic conditions and rainfall, particularly, seem to have been deteriorating. Rain is getting more irregular when it is not systematically less abundant. Alongside this, we have a veritable population explosion following the spectacular regression of the main diseases, a more effective campaign against famine and food shortage and a certain degree of improvement in living standards in general. The same thing is happening with domestic animals.

Lastly, trading facilities and the ease with which men and ideas can move about the world have made for the rapid dissemination of techniques of exploiting the biosphere. They work, of course, but they are often too aggressive for an ecological environment that is ill-prepared to receive them.

This alarming situation is, alas, confirmed by a certain number of particularly eloquent facts:

— Forests and the tree cover on croplands are declining rapidly and there is a general shortage of firewood for domestic purposes and local craft.  
— In pastoral areas, overcropping is

reducing grass and trees to the point where the land is almost denuded. This can be seen around water points where there is a maximum concentration of cattle.

This overloading is also due to the farmers, who like the traditional method of herding whereby herds should be as big as possible, as well as to the negative and poorly controlled effects of projects aimed at improving animal health and providing water.

— In areas where crops are grown on a large scale, particularly in Africa which tends to have the highest population concentration in the rural world, the rapid increase in the number of mouths to feed has led to crops being extended to the detriment of fallow periods. This has often been made possible by the use of draught animals, which have considerably increased the workload which the peasant farmers can cope with. But it has also led to the destruction of roots and trees to make the use of equipment easier, thereby preventing any resurgence of the plant cover, even with shorter fallow periods.

Note that, in all agricultural areas, the stalks and other waste left after the harvest, which are increasingly used as a source of energy now that wood is short, no longer help reconstitute the humus, maintain the level of fertility of the croplands or prevent erosion by wind and rain.

These few examples highlight two weaknesses in the Community's development aid schemes:

— inadequate environmental training. Such training, which could have created the appropriate reflex in all the people involved in development and would have made it possible to overcome (or at least put up a more efficient fight against) the negative consequences of schemes on the environment;

— the fact that these schemes, which are too sectoral and too exclusively productivist, have not taken enough account of certain socio-cultural factors.

Lastly, at a more general level, these examples show that the development policies that the ACP countries have run, with or without Community aid, have not taken enough notice of the environment. They have put too much emphasis on meeting needs in the short-term and not worried about

what consequences their action might have in the longer term, for all the world as if our reserves of land and water were inexhaustible and the composition of the air living creatures breathe was unchangeable. The facts show that this is all wrong.

Yet the situation has improved noticeably over the past few years, although the schemes the ACP States have run, with Community aid, to protect the environment are still notoriously inadequate to cope with the immense problems and the generally serious situation.

Whereas total Community commitments to (61) environmental schemes were worth ECU 37 million under Lomé I, there were more than ECU 100 m (projects completed, ongoing or scheduled) under Lomé II by 1 March 1984 (1).

Thanks to the Commission budget and the NGOs, several hundred small projects had the benefit of Community aid of ECU 9.5 m between 1980 and 1983.

Additional schemes to help the environment have also been financed from this budget since the beginning of the '80s.

They are:

— the special anti-hunger programme, (more than ECU 16 m) which made it possible to finance 10 projects in 1983 and studies and intervention in the field. A similar amount has been programmed for 1984. This amounts to more than 30% of the funds allocated to the special programme;

— the ecology-in-the-developing-countries line of credit, which made it possible to finance 14 projects, studies and training schemes for ECU 380 000 between 1982 and 1984.

In addition to making this financial effort and learning lessons from its experience in the ACP countries, the Commission has tried, over the past few years, to make up for its inadequacies by reflexion and making people aware of the problem, particularly in Europe, with the help of the Member

(1) Type of schemes: anti-desertification, reforestation etc.; environmental protection (parks, fauna etc.); renewable energy; anti-drought, water management; village water engineering; soil protection, conservation & improvement; fisheries & stock management; various environmental schemes.

States. This led the development ministers who met on 5 June 1984 to tackle three main, specifically environmental schemes as a matter of priority. Each of these was based on research that was in touch with reality and involved a lot of information and training for the economic operators and the populations concerned. They were:

— the campaign against desertification — reforestation, the rational use of firewood, renewable energy, the anti-erosion campaign and raising the physical and chemical standards of arable land;

— developing wild and domestic livestock with due respect for a proper balance between water, grazing land and livestock;

— globally-oriented water resource management, i.e. a sounder understanding of the underground water supplies and how they are reconstituted, tapping techniques, conservation techniques, how to recuperate surface and sub-surface water and use it economically, and methods of drawing water that use renewable energy (solar power and wind power).

Along the same lines, ACP-EEC negotiations, currently being held with a view to the future Convention of Lomé III, are taking considerable note of the need for proper management of the natural factors of production. This, as we have seen, is very much linked to development. It is one of its foundations if the economic and social development we are all so anxious to achieve is to last.

Sound management is everybody's concern. It is a daily task and it calls for concerted action by us all.

These three ideas should be behind the discussion and implementation of all development policies in the ACP countries in the future.

These are the conditions on which man, so often one of the factors of environmental destruction in the past, will become the prime mover in the campaign to stop the process of environmental destabilization and even reverse the present trends. But this means a profound change in the outlook and execution of all development schemes. Not a difficult task, bearing in mind everything that is at stake, but one that will take a very long time. ○

R.G.

# Education and Training: a key factor for a healthy environment

by Dr Klaus R. KUNZMANN(\*)

In 1980, the Committee of International Development Institutions on the Environment (CIDIE) signed the "Declaration of Environmental Policies and Procedures Relating to Economic Development". This declaration re-affirmed their support for the principles and the Plans for Action of the United Nations on the environment. It also stressed the need to provide training in environmental matters to professionals in developing countries and to support the training of operational staff in the environmental dimensions of economic development.

The CIDIE's declaration, and the need for operationally useful information, were two reasons why the European Commission initiated a study on "Environmental Education and Training for and in Developing Countries".

The Stockholm Conference in 1972 had led to a multitude of efforts, programmes and actions to introduce environmental education and training at all levels. These efforts culminated in the UNESCO-sponsored Tbilisi Conference in 1976, giving rise to the formulation of general recommendations, which, in their substance, are still valid.

Nevertheless, in developing countries and elsewhere there is still an imbalance between verbal or written statements and/or policy declarations and real substantive achievements; a polarity between a general environmental conscience and individual economic thinking and behaviour; a lack of the necessary knowledge of how to design, enforce and implement *strategies* which combat the negative impacts of industrial development, resource exploitation, extensive firewood cutting or inappropriate cash-crop farming; a lack of environmentally conscious engineers and economists within the administrations at the

national and regional levels; a lack of technical and administrative personnel at the lower and middle level which is sufficiently educated and trained to monitor, execute and control environment-related activities, even though there is an increasing demand for the training of officers at regional or sub-regional levels who will have a key role in environmentally sound development planning.

Given the paucity of specialized in-service training programmes, there is also a considerable lack of awareness among the professionals working in international and national development agencies.

Environmental education and training cannot certainly overrule economic thinking nor counteract short-term power politics. It would be too naive to think that environmental problems can be solved instantly, but resolving them is a precondition for sound development and education and training is an important step in that direction. In this respect, three major questions arise: what are and what should be the major *target-groups* for environmental education and training; where does and should environmental education and training take place and how should environmental education and training be designed?

## Major target groups

Target groups in developing countries range principally, from primary school children and illiterate adults, through teachers and professionals in all fields, to policy makers and politicians responsible for formulating and implementing development policies.

All of these groups constitute, in one way or another, target groups for environmental education and training. It is irrelevant whether "development from below" or "development from above" principles guide institutional policies. More important is that environmental education and training must primarily be given to potential multipliers, to opinion leaders, to decision-makers and to professionals acting in or dealing with economic development in developing countries. Only in this way will the necessary grassroot level activities for protecting the environment be guaranteed and the necessary political and financial support be acquired from above.

## Training of trainers

One deficiency deserves special mention. The *training of trainers* for environmental training has until recently received little attention. Professionals at institutes of higher education in Third World countries, having been educated in the developed world's universities, have little teaching and training experience. Rarely are they taught the didactic manner of spreading information.

The training of trainers, therefore, is the key to the creation, and the strengthening of the necessary environmental conscience of the general public and the professions.

Given current environmental education activities and the limited resources and absorption capacity, national and international target groups should be those groups which are the essential multipliers within their countries and development institutions.

The three essential multiplier groups are:

- *professional* trainers: university professors and lecturers or trainers at governmental or non-governmental training centres;
- economists and engineers, the key groups guaranteeing environmentally sound development planning in Third World countries;
- journalists and professional experts in developing institutions initiating, executing, monitoring or evaluating development projects.

This implies that priority should be given to raising the environmental conscience and methodological know-

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This is a summary of a study recently carried out by Dr. K. Taylan Dericioglu and others for the European Commission.

The report is published in English and can be obtained from the Institut für Raumplanung, Universität Dortmund, P.O. Box 500500, D 4600 Dortmund, F.R. of Germany.

ledge of professionals involved in all aspects of development planning rather than training environmental generalists, who, in developing countries, lack an institutional base for their activities.

### **Where environmental education and training should take place**

Most advanced environmental training and education activities take place at an increasing number of locations in the developed world. The majority of courses are designed for the needs of the developed countries' professionals working within their own national context. The number of programmes explicitly or exclusively tailored to the needs of developing countries is rather limited.

Priority should, therefore, be given to supporting existing or potential environmental education and training institutions located in developing countries, where professionals have the immediate experience of the appropriate operational context and where instruction can be given in the working language. This could contribute to relieving the "brain drain", reduce the danger of transferring inappropriate values and instruments and reinforce the education and research potential of developing countries.

Environmental education and training in industrialized countries for professionals from developing countries is only acceptable if such programmes are tailored to meet their specific regional requirements.

Joint programmes between education and training institutions in both developing and developed countries by means of long-term political and financial commitments should be sponsored. With the assistance of international advisory boards the quality of their performance could be continuously assessed.

Any institutional support should primarily be directed to regional training centres, where students and professionals from a number of developing countries in the region can be brought together.

### **How environmental education and training should be conducted**

In the past, the increasing awareness

of environmental problems led to the establishment and design of numerous education and training activities all over the developed and developing worlds. Some of them are of a comprehensive nature, but the majority favour sectoral approaches to cope with selected negative impacts of development on natural and man-made environments.

The prime concern of future education programmes must be to stimulate an awareness of the importance of the environmental component of development, while that of training programmes is to refine the incorporation of the environmental dimension into professional performance or to transmit new theories, methods or instruments.

It is, therefore, essential to engender a positive attitude towards environmentally sound development in all disciplines which are concerned with the development process, and not to restrict education and training to environmental specialists or generalists.

### **Essential design criteria for the establishment of environmental training**

Due to differing physical, social, economic, cultural, and political conditions in developing countries, there are no universal substantive solutions for environmental education and training programmes. People's attitudes to and perceptions of the environment depend on their development status. Countries confronted with different environmental problems usually possess and require different instruments of control. Thus environmental education and training programmes must undoubtedly reflect regional environmental conditions.

### **Research**

Environmental education and training in developing countries must be connected with environmental research. Only an extensive knowledge of the local or regional environment and of those decisive forces determining the transformation of the local and regional environment will allow the development of counteractive strategies for its protection and conservation.

Training courses must be tailored to the specific needs of single target groups, for example, development economists, teacher trainers, journalists, transport engineers or policy advisers. Careful programme preparation should result in a greater learning effect and subsequent multiplication. The availability of training packages for selective training objectives would certainly facilitate and accelerate the transfer of knowledge and capability. Experiences from professional management training centres should be adapted to the design of appropriate training courses in the environment sector.

### **Content of programmes and absorptive capacity**

The content of environmental programmes and courses should always take account of the absorptive capacity of the respective country or institution. The more complex and advanced the administrative system of a developing country the more sophisticated the training or education programme can be.

It is also indispensable that environmental education and training emphasize active planning. This means that environmentally sound development must be anticipated. Reactive environmental protection must be regarded as only a "second best" approach for the protection of the ecosystem in the Third World. Similarly, this implies that environmental education and training must be orientated towards *practicable feasibility*, otherwise such education and training will be useless for the active conservation of the ecosystem.

Given the varying socio-political conditions of the occupational context it is obvious that any environmental education and training should include the political and economic ramifications as an integral part of the pure scientific, methodological and theoretical contents of programmes and courses. Therefore, when formulating aims and contents of training programmes, personal dependencies and constraints of professionals operating in developing countries, must be taken into consideration. ○

K.R.K.

# Forests in dry areas in the tropics — what is at stake

by Jean-François BÉLIÈRES and Sylvain STRASFOGEL (\*)

One of the great and most ineluctable of disasters awaiting us at the end of the 20th century is probably desertification. Unlike the threat of nuclear warfare, which is something all our political leaders are worried about, desertification has been with us for over a century, but world opinion only takes it up occasionally—in times of great famine or drought—and people in authority do not seem to have any proper action programmes to cope with the risks we are running.

Desertification, in fact, is nothing more than the most serious and most spectacular result of the combined effects of deforestation and particular climatic and pedological conditions. Deforestation, in all the countries of the Third World is due to a growing demand for arable land (to the detriment of the forests), a vital need for the energy derived from wood and allied products, the need for wood for building etc and major regional development schemes.

Locally, the results of excessive deforestation tend to be: irreversible soil erosion; a substantial change in the microclimate; a decline in the stock of species and genetic resources; an economic loss of capital; a deterioration in the standard of living of the surrounding population.

Although natural regeneration can cope with human excesses fairly well in the humid parts of the tropics, any over-exploitation in the dry areas will lead to desertification that is well nigh irreversible.

So, in these areas, the preservation of natural forests is vital for food and for the survival of the human race.

Although one or two rural and forestry action programmes have momentarily relieved local pressure on the environment, none of them has provided any large-scale, lasting system of protection of the environment and its development.

## Irreversible galloping deforestation

The FAO says that about 29.7 million km<sup>2</sup> of the tropics were covered

with trees and bushes and fallow forest land in 1980 and that 0.62% of the dense tropical forest and 0.52% of the open tropical forests of the world have been felled.

Table I shows that the general trend has been fairly slow, but it masks any local or regional differences (particularly in dry areas composed essentially of open and fallow forests and bushes), which do not appear in these data.

The results of censuses of tropical forests are still too recent to enable us to assess the precise degree of deforestation in each of the zones, but this figure is decisive when it comes to finding out how far desertification has advanced in each of the sub-regions (although it is possible to see this from certain indicators such as shortage of firewood and/or rate of land occupation). The extent of deforestation and the type of schemes needed to cope with it can be assessed from where a zone is placed on the graph in table II, page 69.

Although this is a very theoretical presentation which does not adequately reflect the possibilities of natural

regeneration, it does show how deforestation gathers speed and, therefore, reveals the tendency towards irreversibility.

When supply and demand get out of balance, there is a short period during which things can be put right if the proper steps are taken. But the situation becomes virtually irreversible very quickly.

The graph on page 70 shows the different schemes that should be run in the Sahel today if balance is to be re-established by the year 2005.

The suggested solutions for curing deforestation in one of the worst-affected areas of the world combine tree-planting, managing resources and energy-saving through the more rational use of wood and the introduction of substitute fuels.

It is important to bear in mind the following:

- the size of the means required;
- the minimal impact of forest plantations;
- the vital need to cut wood requirements.

## Forests and self-sufficiency in food versus desert and famine

Demographic growth is most commonly pointed to as the cause of deforestation, but it would be nearer the mark to talk about the non-adaptation of society and its system of resource exploitation to a change in population density.

Traditional (itinerant) farming methods based on long fallow periods meant that timber resources could regenerate and the fertility of the land could be safeguarded, but a population increase and the absence of any change

**Table I**  
**Deforestation in the tropics**  
(<sup>000</sup> km<sup>2</sup>, annual % of area)

Tropical region	Dense forest		Open forest		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/UNDP evaluation of tropical forest resources (Courier ACP-CEE no 74, July-August 1982).

\* Association Bois de Feu, 73, av. Carot, 13013, Marseilles, France.

in growing techniques led people to compete for land. This in turn led to:

- an extension of the areas under cultivation;
- shorter fallow periods;
- an attendant attack on the forests.

Between 1900 and 1965, about half the forests in the developing countries—something like a billion hectares—were apparently cleared to make way for crops.

The increase in the number of herdsmen, combined with improvements to health and livestock and the drilling of new boreholes, resulted in an overall increase in the number of animals. And the growing need for land for crops led to a reduction in the amount of grazing land. So, in fragile eco-systems, the herds overcropped the land (1) and denuded the trees.

The explosive growth of the cities generated a trade in wood to meet the demand for fuel for homes and cottage industries. Supplies of wood and charcoal to the towns were obtained from concentrated, excessive exploitation of the forests, while rural dwellers collected their supplies in a diffuse and therefore less damaging manner.

Lastly, these indirect effects of the growth of the population combined with the effects of successive droughts to alter the eco-systems by accentuating the deterioration of the plant cover.

The result, overall, is a reduction in the forest plant cover and a stagnation in agricultural production.

This competition between farmer, herdsman and forester is, in fact, to the detriment of all three:

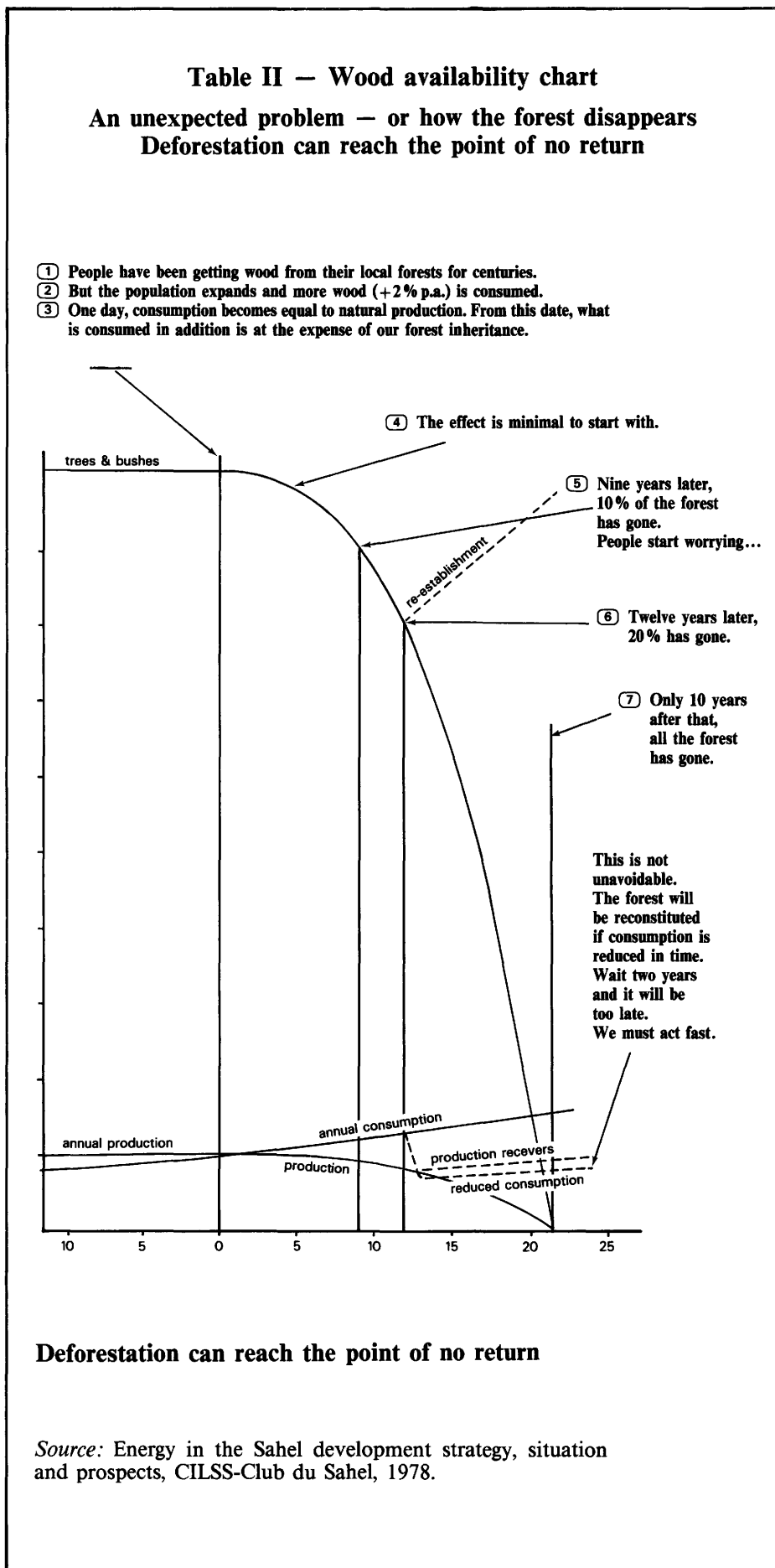
- The increase in the amount of land under agricultural production has not led to a corresponding increase in output. There is even a decline in productivity. In the Sahel, for example, millet yields dropped from 501 kg per ha to 408 kg per ha between 1955 and 1975.

- The reconstitution of herds in the Sahel after the drought was not done with a view to greater productivity.

So meeting food requirements engenders a continuous process, of which the successive stages are:

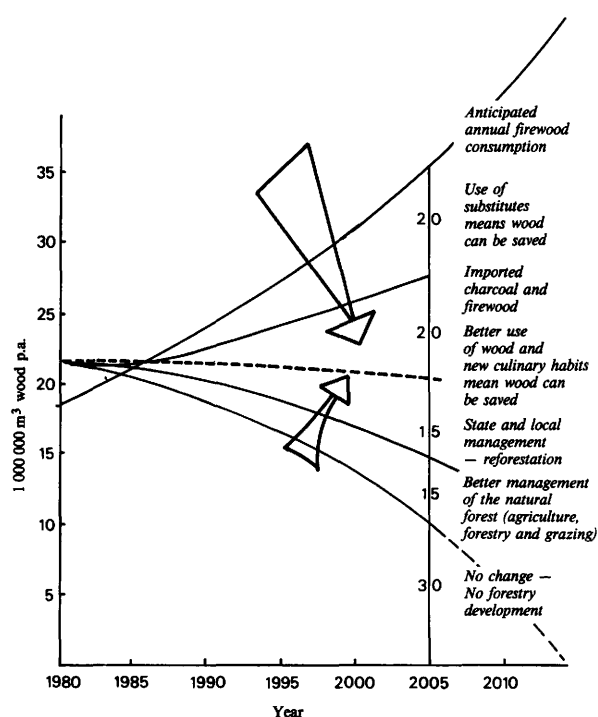
- over-exploitation of natural re-

(1) Not just the grasses but young ligneous species too.



## Wood shortfall in the Sahel — contributions and measures to make up the deficit by 2005

Wood shortfall forecast in the Sahel and measures to be taken to meet the deficit in 2005



Source: Jean Gorse, World Bank

Anticipated wood shortfall in the Sahel  
Main basic data and hypotheses

Country	Mali, Niger, Senegal, Gambia, Upper Volta
Total area	2 989 000 km <sup>2</sup>
Total population	25 200 000 in 1981 (IBRD report)
Demographic growth	2.5% p.a.
Wood consumption	0.75 m <sup>3</sup> per person p.a.
Area under cultivation	124 000 km <sup>2</sup> in 1970 (FAO report, 1970)
Extension of area under cultivation	1.8% p.a.
Natural forest cover:	
• area in 1981	700 000 km <sup>2</sup> (ORGATEC, CILSS & OECD reports for 1981)
• volume	1000 m <sup>3</sup> p.a.
• natural growth	30 m <sup>3</sup> per km <sup>2</sup>
• over-exploitation	1% of forest cover destroyed each year (1)
• improved management	should mean that 50% of the cover destroyed by over-exploitation can be saved over 25 years
Reforestation:	500 000 ha over 25 years (i.e. 7 m <sup>3</sup> per ha p.a.)
• by the state	1000 000 ha over 25 years (i.e. 3.5 m <sup>3</sup> per ha p.a.)
• by the rural communities	including Sudan and Sudano-Guinean zones Cycle of cutting: 5 years Life of the plantation: 20 years
Better use of wood	Saves about 5% of anticipated consumption for 1990
New culinary habits	Saves about 10% of anticipated consumption for 1995 Saves about 15% of anticipated for 2000
Use of substitute fuels	Saves about 20% of anticipated consumption for 2005
(1) 25%: of the wood from forests destroyed by overexploitation is used as fuel.	

sources (land clearance and deforestation);

- deterioration of the plant cover;
- weakening of the soil (erosion, decline in fertility);
- poor agricultural productivity;
- a search for new land (clearance and deforestation).

This process is all the more spectacular for being encouraged by strong demographic growth.

There are not only food requirements to satisfy, either. There is energy to be provided too. About 80% of the energy requirements of people in these dry zones are covered by natural woods and forests. Cooking only accounts for 60% of this and food has to be cooked before it can be eaten. The collection of firewood for use in both town and country makes a considerable contribution to deforestation

—which in turn leads to a real energy crisis in some areas.

The firewood shortage has certain important consequences for nutrition and, in some places, people can only cook one meal a day because they are short of fuel. One could, in fact, envisage an extreme situation in which people with full grain stores died of hunger.

Deforestation also has other conse-



quences in everyday life. For example:

- firewood collection is more difficult and time-consuming. It is usually done by women and so it is to the detriment of the jobs they do in the home and their bringing up of the children;
- food products that go into local dishes and other products in the traditional pharmacopoeia disappear;
- rural arts and crafts are lost because there is no wood available.

The forest plays a vital part in the campaign for self-sufficiency in food and energy in the developing countries and any future development in town or country areas will, of necessity, involve a harmonious development of farming and forestry. The growing demand for food should be met from an increase in productivity from existing arable land and attention to sound management of forestry resources and potential. Energy requirements should also evolve to reflect the possibilities of natural regeneration and the development of new plantations.

### Ongoing action programmes and prospects

There are five types of programme that affect the environment:

- rural development projects;
- forestry and rational wood utilization programmes;
- soil protection and restoration projects;
- urban development schemes;
- certain major works (dams, roads, etc).

Until relatively recently, these programmes were always designed and implemented on a sectoral basis, with no horizontal and/or vertical integration. There follows a brief justification for this statement.

Urban development schemes are to the detriment of rural areas. Firewood supplies to the towns result in over-exploitation that destroys the natural resources of the rural environment. This leads to a conflict between the woodcutters and the farmers, whose land is destroyed without any compensation. The increase in the kind of housing that uses a lot of wood, either directly (in construction) or indirectly (to bake bricks), has an adverse effect on the forests.

Major public works such as road

building and dam erection ravage the surrounding areas. The Manatali dam, on the Mali-Senegal-Mauritania frontier, is a fine illustration of this type of waste as, in spite of several years of technical expertise, it will be impossible to capitalize on the biomass which is submerged when the reservoir is filled.

Although a certain number of agricultural and livestock development projects involve some sort of forestry development, the conditions for a fresh balance between farming, forestry and grazing—i.e. methods of using the natural environment that are both more productive and able to protect the environment—have never been really defined and disseminated. This may be due to agricultural and forestry research failing to take adequate account of the complementarity of the three activities. Although food production development schemes have not strongly compromised the balance, the development of cash crops, with their high rate of mechanization, has brutally destroyed existing eco-systems without generating any protection.

The forestry projects that were intended to use massive planting to strike a fresh balance between supply and demand on the basis of tree-types and mechanized, labour-intensive techniques perfected on research stations have not, in fact, reached the original targets.

When these projects were implemented, the relevant physical and human environment was not taken sufficiently into account and the rate of growth of the trees often turns out to be two or three times lower than during testing.

The good-quality soil required for this type of forestry is not available and the plantations have, in fact, been set up on poor marginal land.

The rural communities and the traditional rights by which they are governed were overlooked when these projects were devised. The rural dwellers' involvement is often confined to paid work on a non-permanent basis, but if locals are to take the plantations in hand, then they have to have proper training and a guarantee of a share in what is produced. The industrial plantations are isolated units which cannot really be copied elsewhere and

have only an insignificant impact on deforestation. However, the recent development of reforestation schemes of the rural forestry type, village and family plantations, natural regeneration of species and the development of natural tree-land based on the mobilization and massive involvement of the local populations seems a more promising way towards proper satisfaction of wood requirements.

There are only a few soil conservation projects aimed at recuperating land for agriculture by improving and fixing the soil in the dry regions, in spite of the fact that needs there are immense.

So these different types of programme have not stopped deforestation. But the schemes have made it possible to capitalize on experience and devise methods that are more in line with the diversity and complexity of the existing environment — which means that further projects, based on an efficient multi-sectoral approach, can go ahead.

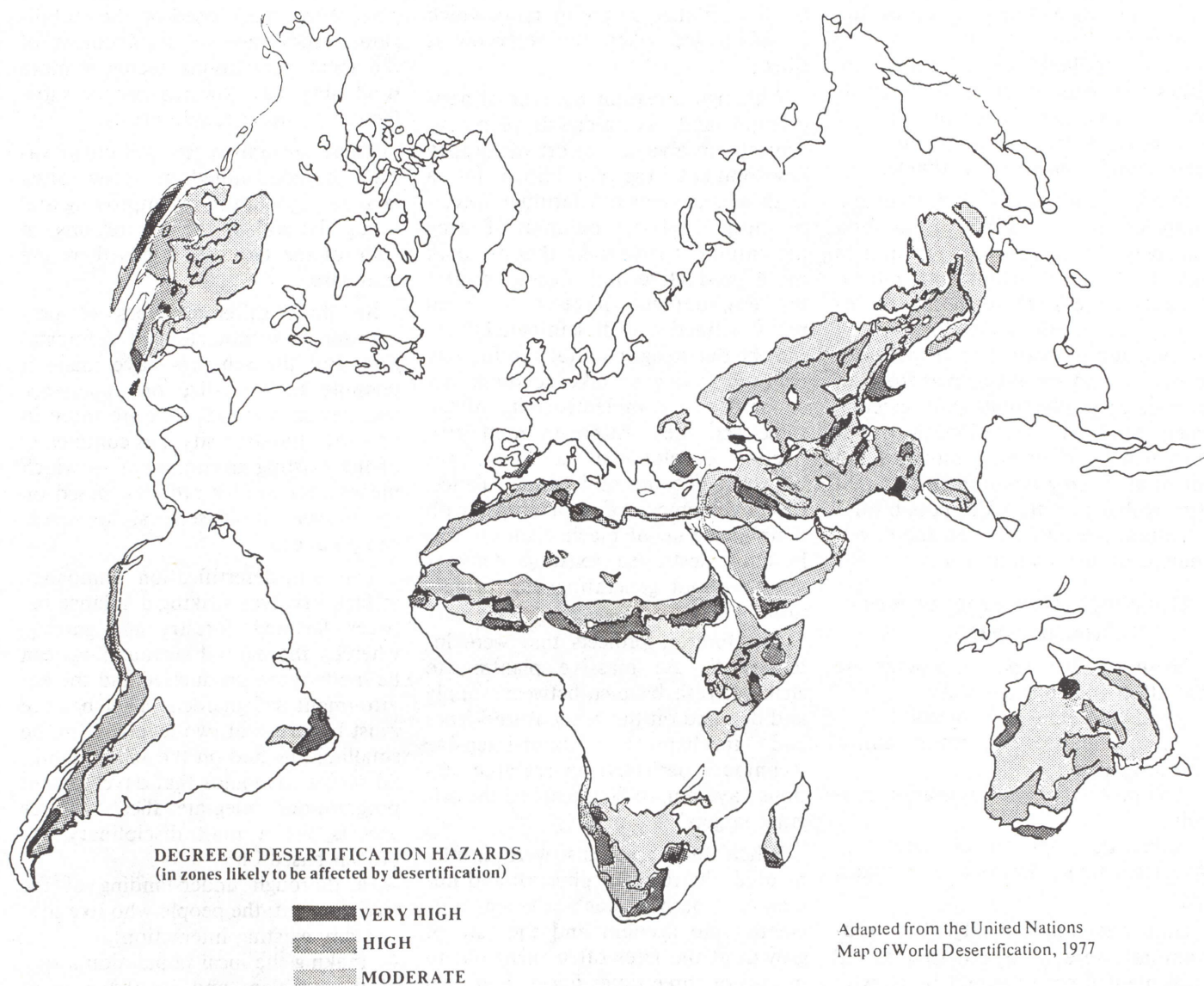
The anti-desertification campaign, in fact, involves striking a balance between farming, forestry and grazing, whereby the natural surroundings can be made more productive and the environment safeguarded. This balance must be struck at two levels — on the smallholding and on the village lands. So success demands that development programmes integrate these various aspects via a multi-disciplinary approach based on:

- a thorough understanding of the environment, the people who live in it and any existing interaction;
- making the local population aware of the problem and involving them actively, from the definition of schemes and means through to final implementation;
- a range of technical schemes that are both suitable and complementary and which meet food and energy requirements while improving the life of the people and the environment.

Deforestation, which weakens populations and destroys natural resources, brings deserts and famine in its wake. So it is vital to save the forests in the dry tropical regions of the world if we are to guarantee an improvement in agricultural production and the development of urban and rural populations. ○ J.-F.B and S.S.

## Seven years after UNCOD

### A harvest of dust



Adapted from the United Nations  
Map of World Desertification, 1977

When the United Nations Conference on Desertification (UNCOD) was convened in Nairobi in 1977 amid a blaze of publicity there was no mistaking the importance and seriousness of the occasion. Humanity, it seemed, had at long last awakened to one of the greatest (if not the greatest) challenges of our time, namely to halt and possibly roll back the deserts which are creeping fast upon our planet's vegetation cover. The widespread interest and enthusiasm engendered by the conference and the sweeping plan of action adopted when it wound up led many to believe that by the end of this century the advance of the deserts

would be a less preoccupying, if not marginal, problem in environmental matters.

Seven years after, instead of being halted or rolled back, desertification is occurring at breathtaking speed: irretrievable deserts and semi-deserts are now advancing at the rate, respectively, of six million hectares and 21 million hectares per annum. A total of 3100 million hectares of the world's rangelands and 355 million hectares of rainfed croplands plus 40 million hectares of irrigation-fed lands are now affected by desertification. In fact, the past seven years has yielded nothing but a harvest of dust. This is the pic-

ture that emerged from a report presented by the United Nations Environment Programme (UNEP) to the 12th session of its Governing Council last May in Nairobi. The report forecasts the advance of deserts on rangeland and rainfed cropland to continue at the present rate for the next 15 years unless realistic remedial measures are taken.

The reasons given for the deterioration are largely the same as those identified before and during the 1977 conference: human over-exploitation of lands through overcultivation, overgrazing, poor irrigation practices and deforestation, with drought worsening

## DOSSIER

the situation in different parts of the world.

Not much attention seemed to have been paid to the Nairobi Plan of Action which many greeted as one of the most thorough documents that a United Nations conference has ever produced.

There are, of course, excuses. Most developing countries cite inadequate financial resources, organizational problems and lack of public awareness.

Admittedly, these are serious constraints but experts have pointed out that a modicum of efforts by governments in the Third World plus a more judicious spending of available money would have gone a long way to limiting the damage.

Since 1978, some US \$ 5000 million have been spent on anti-desertification projects. While this sum is evidently insufficient vis-à-vis the magnitude of the desert problem, it has been spent in areas that have no direct connection with anti-desertification campaigns. According to Professor H.E. Bregne of Texas Technical University, the bulk of the \$ 5000 m was spent on the construction of roads and buildings, on water supplies and on research, training courses and meetings.

Little or no funding was made on projects aimed at assessing desertification, urban/rural environmental interrelations, biological resources and ecological monitoring.

As several articles in this dossier point out, demographic pressure on land is the main factor of desertification. Nowhere is this more evident and serious than in Africa where UN projections of rural population growth in the next 30 years is 200%.

Any attempt at stopping the spread of deserts must therefore start with curtailment of the growth of population. Third World populations, it is true, do not take easily to birth control but this does not mean they resist the idea. Like the campaigns on conservation, reforestation and the use of alternative sources of energy, the family planning message is either non-existent or not getting through to the populations and when governments advance lack of public awareness as one reason for the failure of the anti-desertification campaign in their countries they un-

wittingly display their ineffectiveness or lack of political will.

Finance, no doubt, is a major problem and this can be traced to lack of political will, goodwill and international solidarity in a planet developed and developing worlds alike share.

Action has so far attracted a total of \$ 48 524 — and from only five donor countries.

It was against this background that a number of suggestions on ways of raising funds have been made and most have already been dismissed var-



Association Bois de Feu

### Maintenance of a nursery forest in the Tahoue region of Niger.

*Anti-desertification projects, like this one, must be multiplied in the coming years to avert an ecological disaster of an unimaginable proportions*

UNEP's executive director, Dr Tolba, says that the Nairobi Plan of Action remains viable and estimates the cost of implementing it over the next 20 years at \$ 90 000 million, or \$ 4 500 million on average every year.

If past records are anything to go by, mankind may just as well give up the fight and accept desertification of our planet as an inevitable doom — and it would be no use trying to fight back at the eleventh hour.

In the 10 years since it was launched, the desertification fund has brought in only \$ 5 300 million. A special account set up at the end of the 1977 conference to generate finance for the implementation of the Plan of

iously by those who wield political and economic power and dictate the world's financial arrangements as "impracticable" and "far-fetched". These suggestions include taxation on trade flows, on yields from the resumption of gold sales by the International Monetary Fund, the setting up of a public corporation which could borrow on world markets on concessionary terms and taxes or "parking fees" on geo-stationary satellites located above individual countries. Dr Tolba believes that some of these suggestions, which are today described as far-fetched, "may not seem so in a few years' time", but will such recognition of reality not be at the eleventh hour?

o A.O.

# ADRAR: rebirth of a desert civilization

by M. D. BENSTAALI (\*)

The Sahara is not only the biggest desert in the world (it accounts for almost a quarter of the world's 26 million square kilometres of desert), but also the most arid. It covers a quarter of Africa, running from the Atlantic to the shores of the Red Sea, and from the Atlas Mountains to the steppes of the Sudan. It is difficult to say where the Sahara exactly begins and ends: it is a constantly shifting mass dotted with rocky outcrops.

There are several different types of terrain in the Sahara — sandy areas known as *erg*, flat stony expanses called *reg*, and mountainous regions.

In the *erg*, dunes are sometimes 200 metres high. They are not stable but constantly shifting; a type of dune called *barchan* can move forward at a rate of 10 to 15 metres a month. Some *erg*, for example, are 300 kilometres long and 150 kilometres wide.

The *reg*, on the other hand, is an immense plain of hardened sand covered with black stones or rock chips. In this case, the rugged, tortured original landscape has been smoothed by the erosion of rivers that have long since dried up. Some *reg*, such as the Ténéré in Niger, are so huge they seem to stretch to infinity.

In the Sahara, everything—man, his environment, colours—seems relative. There is no scale by which to gauge the size of things. There is nothing but the desert's blindingly bright surface.

In order to reach the *ksour* (fortified villages), you have to walk through a maze of clay walls or reed fences that protect little plots of arable land from wind and sand. The villages themselves consist of labyrinthine alleyways and houses that huddle close together to afford protection from the sun.

Water is a more precious liquid than oil for the future of the Sahara. Without it, it would be impossible to farm, to prospect for minerals, or to set up the new industries that are changing the economy, the landscape, and the environment of the region. All the water in the desert, which provides sustenance for oases and crops, comes

from underground.

It was long believed that these underground reservoirs contained fossil water that had accumulated as a result of infiltration over the ages. In fact, it is simply a process of gradual accumulation, deep down, of rainwater from outside the Sahara. But it took a very long time for the water to seep through the various geological strata. Some authorities are of the opinion that about 1 200 years must have elapsed between the time the rain fell and its re-emergence today. In other words, people living in the oases are drinking rainwater that fell when the Caliph Harun Al Rashid was alive!

These reserves of water are considerable, but ever-increasing technical resources are needed in order to exploit them.

The oasis dwellers of the southernmost Sahara use old-fashioned but efficient methods of water extraction which enable them to grow vegetables and to plant palm trees.

Irrigation usually depends on water being drawn up from below ground.

The most original irrigation system used in the Sahara is without doubt the *foggara*, a long underground canal that brings the water from its source, in sandstone deposits, along a tunnel (so there is as little evaporation as possible) to where it is needed. The water seeps up into the tunnel through capillary attraction. It then flows down a gentle slope to the oasis, where it is collected in a reservoir, called a *majem*. From there it is distributed to the crops via other channels known as *seguia*. The advantage of this form of irrigation is that it requires no effort

by man or beast, and never dries up. Moreover, the supply is constant.

*Foggaras* can be recognized by a series of holes in the sand every ten metres or so. These enable debris to be removed and the tunnels, sometimes 30 or 40 kilometres long, to be kept in good condition.

The "engineers" of ancient times showed admirable technical skill in finding the precise location of springs. The *foggara* begins as a ditch but continues as a tunnel that goes down into the ground. The tunnels are too small for a man to stand upright in them. It has been calculated that it must have taken four men a year to dig a kilometre of *foggara* — not to mention the high risk of accidents such as the roof caving in, which doubled the time needed to complete the task and caused many deaths among the diggers.

In recent times, many *foggaras* have been in a sad state of disrepair, abandoned, caved in or silted up.

But nowadays there is a new approach to the problem of water supplies. Because they are a source of life, *foggaras* have begun to be respected again. In the old days, the man who paid for the *foggara* to be dug in the first place became its owner and consequently sold the water it produced to other people. The situation has completely changed today: water belongs to the community at large. The administrative and technical authorities of the *Wilaya* (province) stress this, urging people to maintain the *foggaras* in good condition by making a financial and physical contribution in a communal spirit. The resulting supply



Dunes in the Sahara

(\*) Source: Unesco Features.

of water is shared out in proportion to each person's participation, according to a pre-arranged system of measurement known as the *habba*. In this way, every inhabitant is entitled to one, two or three *habbate*, which provide him or her with drinking and irrigation water for the year. The 52 *ksours* in the *daira* of Timimoun have no less than 202 *foggaras*.

### Stark contrasts

In the *wilaya* of Adrar (1), there seems to be an almost endless supply of underground water. It has almost 1 500 kilometres of *foggaras*, out of a total of 4 000 for the Sahara as a whole. This contrasts starkly with the water shortages that afflict the unfortunate inhabitants of many districts in the cities of the north, especially in summer. In Timimoun, for example, there is a supply of water to every home, and the commune has brightened up the town by placing fountains here and there.

But irrigation by the *foggaras* can no longer answer the needs of full-scale agricultural development. So another technique has had to be used: the sinking of wells. Of the 60 wells scheduled, 34 have already been sunk. But the number is still too low in view of the potential that remains to be tapped: according to a survey by Unesco experts, 800 wells yielding a water supply of 15 cubic metres per second could be created without any danger of exhausting the underground water reserves. Moreover, if optimal use is made of the available potential, it will be possible to exploit 10 000 hectares of land for agriculture.

This abundance of water has over the last few years enabled the Algerian government to invest as necessary and gradually transform the region by adapting and introducing new agricultural techniques, and by experimenting with and selecting plant varieties likely to benefit most from the underground water. Agriculture has got off to a new start. Tomatoes are now grown on a large scale in the *wilaya* of Adrar and then either sent to northern Algeria or exported, mainly to the German Democratic Republic.

The regional government hopes to create the right conditions for the local

population to give expression to their specific character and satisfy their needs. This pragmatic approach is successfully changing the face of the region, and the genius of man is making increasing inroads into the majestic but rugged surrounding landscape.

Despite the particularly difficult climate—scorching temperatures, sand storms, the *sirocco*, and even frost in some inhabited areas—considerable efforts have been made to develop agriculture by adapting it to local conditions. There has been a new approach based on increased market gardening including the use of glass-houses. These techniques have produced conclusive results and it is planned to extend them to grow new and more varied crops such as henna, cotton, groundnuts, and so on.

For some years now, the farmers of the region have become more and more aware of the need to diversify their crops. The experimental growing of garlic and broad beans has produced quite sizeable yields. There has been similar success with potatoes, onions, beans, wheat, barley, maize, sorgho and citrus fruits. The technique of crop rotation, making possible several harvests a year, has been tried, with promising results. Crops of excellent quality have been grown under glass at Mokra, in the vicinity of Adrar. Farmers are looking to the future.

But for the time being tomatoes are the most profitable and therefore most widely grown crop. They are even becoming a more familiar sight than that native of the desert, the date palm. The number of palm trees is now 1 200 000. It is a crop that is all the more likely to lose its good image because the palm tree requires large amounts of water and does not begin to produce fruit until the 11th or 12th year of its 30-40-year lifespan. It is estimated that in southern Algeria an adult palm tree consumes on average a litre of water every three minutes; so a palm plantation, with 121 trees per hectare planted at regular nine-metre intervals, requires some 40 litres of water per minute. If palm trees are not looked after properly they may produce fruit of mediocre quality. The local population consumes part of the harvest on the spot and exports the rest to neighbouring countries in ex-



A "segua" near Adrar

change for a few heads of livestock.

Decisive efforts have been made to improve elementary, middle and secondary education, and, according to Mr Boudergouma, *wali* (prefect) of Adrar from 1980 to 1983, a teacher training institute is now being built.

In 1977, the percentage of children attending school was lower than the national average. Following the building of schools and the training of teachers over the last five years, that has now risen to 70%.

There is room for further improvement, on the other hand, in the field of vocational training. In order to meet current needs in this area, it is planned to build five training centres and a paramedical school. Hospitals with 120 beds have been built in Adrar and Timimoun, while a prefabricated hospital with the same capacity is now going up in Reggane.

While rural housing has been helped considerably by incentives to people to build their own homes, special efforts have gone into providing the population with sports and cultural facilities.

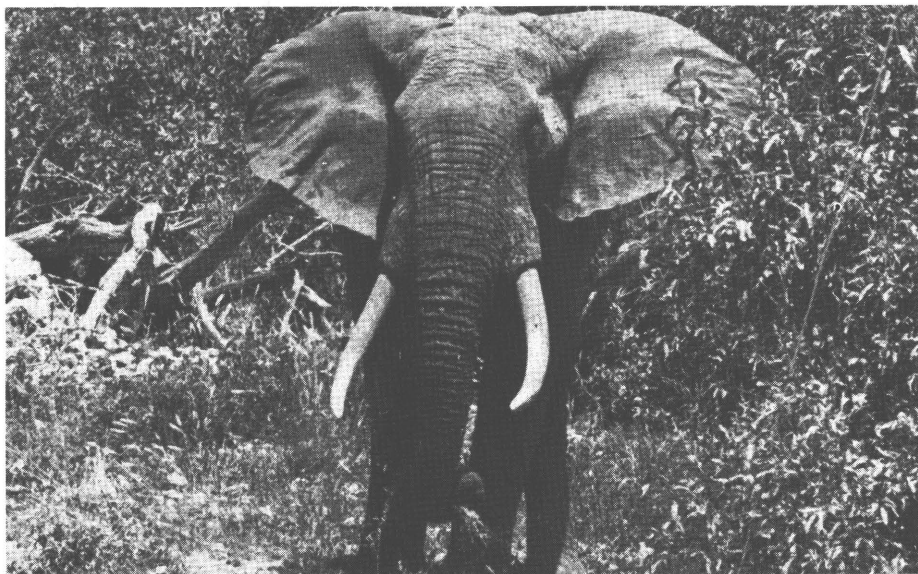
Adrar, the most important town in an ever-expanding *wilaya* where schools and colleges are springing up every day, now has neatly laid-out and tarred streets. It lies at the heart of a region where solar energy provides electricity that is relayed to 70% of the *ksours*, enabling them to enjoy the same benefits—television, air-conditioning, and freezers—as the rest of the country. But Adrar is 1 600 kilometres from the capital, Algiers. So communications are vitally important in the southern Sahara, which is so often forgotten by the inhabitants of the north — if they have heard of it at all. ○

M.D.B.

(1) In Algeria.

# Wildlife: the appalling mismanagement of Nature

by Christiane LINET (\*)



«Hecatomb»

BBC broadcaster David Bellamy recently told stunned compatriots that the UK spent £ 800 million on cutting the nation's lawns every year!

But this incredible figure is not the whole story, for it fails to take account of what all this grass would provide if ecological specialists had their way. Imagine for a moment what would happen if these sterile, close-cropped parklands were replaced by hay meadows, dotted with flowers and buzzing with busy insects. They would still be attractive places for people to relax, but they could also yield several tonnes of honey, making a considerable profit for the bee-keepers, and, as honey is the most nourishing and easily assimilable of the sugars, reducing the burden on the health service accordingly.

This is only one of the many examples of the appalling way nature is mismanaged — and not just in Europe either.

Look at the elephants in Africa. Elephants provide income in the form of ivory. Experts put the annual death rate in a population of 100 000 of these animals at around 4 000. Births

balance out deaths and, barring any human intervention—and any exceptional natural disaster—the size of the herd remains stable. The 4000 deaths include one or two young animals, victims of accidents and predators, but most of them are old. And they carry a lot of ivory (1). Taking 50 kg as the average weight that can be obtained from an elephant that dies of natural causes, the annual cull will be  $50 \times 4000 = 200\,000$  kg, which, at an indicative price of \$ 60 per kg, guarantees a regular income of \$ 1.2 million every year. But what really happens? Today some countries are seeing the substantial amounts they made from their ivory trade wane because they were not content with the income and used up the capital too. All too many elephants, the large-tusked first and then the younger beasts, have been killed and the average weight of the tusks arriving on the market today is 5 kg — a mere 10 kg per animal. So 20 000 elephants are killed for 200 000 kg of ivory. This is intolerable because it will lead to the herd and the fortune it represents being completely wiped out in less than 10 years.

(1) An elephant killed on Kilimanjaro holds the record — 103 kg on the left and 97 kg on the right!

However, the economic value of an elephant is not just its ivory. Tons of live meat are by no means negligible in regions that tend to suffer from protein deficiency and, if this were taken into account, people would no doubt stop poisoning the elephants' watering points with the pesticides (aid for the Third World's agriculture) which slaughter pachyderms of all ages and render their meat completely unfit for human consumption.

Game animals are not just a source of skins, teeth, horn, wool and musk glands. They can also be looked upon as wild livestock and cropped or managed like cattle. Game ranches have already been tried in several parts of eastern and southern Africa. They have not yet been generalized, partly because of the reticence generated by the often secular habits which have forged almost mystic links between the African shepherds and their cattle and partly because of the socio-economic pressure of western ways. Then, of course, stringent controls are needed if the method of management, be it cropping or game ranching, is to withstand the test of time. Cropping percentages have to be fixed with a view to lasting exploitation and the limited number of animals thus arrived at has to be slaughtered by a limited number of qualified people at clearly defined places and times. Cropping has to take place in optimum conditions that will not harm the environment, and care has to be taken not to destroy plant life or to disrupt the peace of other species as well as to hunt by foolproof methods that do not allow wounded animals to escape.

Assuming that all this is done, then—from an economic angle once again—there are a series of factors that work in favour of wild livestock:

— wild animals are perfectly attuned to their environment. They feed intelligently, without exhausting animal or vegetable resources, without trampling the ground too much and without triggering any erosion or desertification.

— there is no need to sow, to mow, to till the soil or flatten the land for wild animals, nor to spread fertilizer or irrigate the pastures. What a time-saver!

— wild animals are sure-footed, armed against their natural predators (be they insects or the big meat-eaters) and they reproduce easily, so the

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Our wildlife is disappearing at an alarming rate. In 1600, the earliest date for which reliable zoological information is available, there were 4226 species of mammals and 8684 species of birds on earth. By 1970, 36 of the species of mammals and 94 of the species of birds had disappeared. Since 1970, things have speeded up and there are now 223 species of mammals and 287 species of birds in imminent danger of extinction because of man's hunting for business and pleasure, his destruction of the environment and his introduction of predators and competitors.

In Belgium, home of the EEC Commission, all reptiles and all batrachians are in imminent danger of extinction.

The figures for insects and fish are not so precise, but many species of fish caught industrially are clearly on the decline.

farmer has no veterinary bills or keepers to pay. And the meat, which has not been contaminated by vaccines, hormones or chemical additives in the feed, is of infinitely better quality.

— the reproduction rate of wild ungulates is greater than that of domestic cattle, particularly animals imported from Europe.

The figures from the Dassmann and Mossman 1961 study of the Henderson ranch in Zimbabwe—which “managed” impalas, zebras, warthogs, kudu, water bucks, buffalo, etc—concluded that such an enterprise would be lastingly profitable. Field and Blankenship arrived at similar conclusions in Kenya in 1973.

There are other fields where the economic value of wild animals no longer needs to be demonstrated. Take the tourist sector, for example. African big game is a powerful attraction as far as tourists are concerned and those countries, such as Kenya and Tanzania, that have managed to protect wild herds in spectacular sites have turned the tourist industries into their greatest earners of foreign exchange.

Another advantage of wildlife is that birds and insects make an essential contribution to pollination, birds and the mammals play an active part in

disseminating seeds and ungulates and pachyderms affect the countryside and diversify the environment by, for example, keeping a particular plant under control or making clearings and tracks through the forest.

Let us stop there. We can already see that the job of putting a figure on all these advantages is going to be a very complex one. How can you assess negative quantities — the fertilizer you didn't have to buy and the vet you didn't have to pay? How do you judge the value of natural spaces that have been preserved through a wildlife conservation policy other than by analogy with sites that have already deteriorated? The advantages a nation may derive from protecting its wildlife occur in many sectors and we have no yardstick by which to measure them. That is one of the biggest difficulties facing conservationists. There is no doubt about the benefits. Some of them are obvious. But they are hard to quantify. But does the absence of yardstick diminish the worth of what has to be measured? The answer is that it can only diminish our perception of it.

There is a further obstacle and a big one. When conservation measures are brought in, they are to benefit society as a whole and the fruits of the conservation policy tend only to be perceptible in the long term. But, in the short term, individuals and groups of individuals may well feel short-changed by these measures and vehement protests, heard to the exclusion of everything else, are the immediate result. This is why conservation can all too often seem like an obstacle to development and progress — a misunderstanding which permeates political and economic discussion at all levels. In a Scientific and Technical Strategy for Europe, the EEC Commission's outline programme for 1984-87, published on 16 April, we noted that conservationism has again suffered at the hands of a faulty argument. This document talks about fishing. The rapid decline of fish resources in European waters has alerted the authorities and they have taken steps to protect their stocks and safeguard the future of the sector. But, according to the departmental writer, “difficulties arose (for the fishermen) when conservation measures were introduced in Community waters”.

This is only a detail, but it says a great deal about the state of mind we have to combat. Positive steps could be taken to help individuals and groups more affected than others by closure or the slowing down of activity. Take the Caribbean and the Pacific, where the annual turtle egg collection on the beach is a profitable proposition. Why not give tax reductions to communities that are suddenly deprived of this immediate income?

Would not the elephant population be more carefully managed if the rural populations were involved, considered as guardians of an asset on which they had to capitalize, paid according to the size of the herd and given an annual premium for any large-tusked elephant.

Before ending this outline of some aspects of the economic value of wildlife, we should list the leisure activities—hunting, fishing, bird watching and photography—attached to it. And, of course, mention must be made of its effect on the diet of the rural populations. Emmanuel Asibey (2) suggests that, in some parts of Ghana, Zaire and the Central African Republic, as much as 75% of the animal protein intake comes from wild animals.

Then wildlife is a source of genetic diversity (3), a vital factor for herding in the future, no doubt, but most importantly a factor of balance in the animal world.

Let us end with what seems to us to be an essential point. Can we ignore benefits that are genuine but not material in nature because they attach to the notion of quality of life? Animals are a source of investigation to the scientist, inspiration to the artist and imagination to us all. Is it by chance that animals appear on the coats of arms of our families, towns and nations? And, for some people, is not the survival of our wildlife a guarantee of the maintenance of their lifestyle, their religion, their culture and their freedom? They stole America from the Indians just by killing the bison, after all... o C.L.

(2) In “Wildlife as a source of protein in Africa south of the Sahara”, 1974.

(3) Charolais bulls are already being crossed with cow-buffaloes, goats with ibexes and cows with bison, all with a view to producing tastier or more resistant animals.

# The environment and the towns of the Third World

by Jean-Pierre DIEHL (\*)

The word "environment" has only acquired its ecological meaning recently, over the past 20 or 30 years at the most. It refers only incidentally to the concept of nature and is situated in the dynamic prospect of conservation of the ecological potential for the benefit of human activity. So any resources removed are seen, not in terms of absolute attack, but of an exploitable and renewable heritage. Less emotion and more reason (1).

The town, from this point of view, poses a double challenge. First of all, it takes over area and removes essential regenerating factors from the biosphere — water from lakes and rivers, forests and arable land. The Romans were already aware of this, as they made a distinction between the land occupied by the town, the cultivated land ("ager") and the reserve land ("saltus"). Secondly, it is a place for reproduction, a breeding ground for forms of society where the poor rub shoulders with the rich without the distances of the country, where religion loses its earthly ritual and where the proletariat emerges from the guilds and corporations and workshops. And these forms of society are not bound by the seasons and the complicated patterns of agriculture. They are haunted by survival. Some people say that new arrivals to the town have not been attracted by the bright lights but thrown out of the countryside. Anyone who dared to dream about motionless countryside and never-changing crops today—and some people do—would be faced with two billion town-dwellers, who never asked to be town-dwellers, but for whom the town represents the hope of a money income, of more than the strait-jacket of a daily ritual and of access to the modern way of life much vaunted by the media, the *nouveau riche* and the state.

In a world where, for the first time in history, man is everywhere, the ci-

ties are the centres of economic, financial and political activity. All together. People throng there in ever-greater numbers, as fewer and fewer of them are needed in the country where productivity is the order of the day. But in addition to the basic needs deriving from this overcrowding—a demand for space, for water, for fuel, for food, for transport and for work—there is speculation which works to the benefit of those who actually have the space, the water, the fuel, the food, the transport and the work. That is the picture.

## Poverty is pollution

Towns eat mile after mile into the surrounding countryside. It may happen in an orderly fashion, but this is only ever an exception in metropolises where the population expands at the rate of 5% p.a. and where private land-owners hold the key to any urban expansion. A tradition of unofficial but methodical occupation of vacant plots has been established, particularly in South America. The "invaders" want the right to enter and get established. Their housing they will build themselves. The authorities respond to this legitimate request in a number of ways — by making the land municipal property (sometimes by-passing the actual landowners for a while), by opening more land for urbanization (with varying degrees of services), by rubber-stamping unofficial occupation and by helping people who wish to build their own homes. But alas, at best, half the new arrivals remain marginalized and overcrowded in shantytowns.

Does it matter what these shantytowns are called locally? Does it matter what they are? In Brazil, for example, they are part of the dramas enacted every day by an exploited population. Water is a rarity, health and education services are poor or non-existent, there is no money and the children are hard-hit by malnutrition.

But these shantytowns are far from being the degenerate suburbs that Le Corbusier denounced. They are an es-

sentia link in the chain of urban life, a valve between the official, organized universe of the regular town and the rest of the world — the country, the black market, black labour. People fear them. They want to surround them with barbed wire and destroy them. The inhabitants are thrown out and the shantytowns burnt at dawn. But they spring up somewhere else. In Mexico, in Dakka, in Manila and Lagos, one out of every two inhabitants lives in this kind of insecurity. The town ignores them, but they cannot ignore the town because that is where they live — or survive.

After years of inertia—were not barriers put up round the shantytowns of Lima to prevent the Pope seeing them?—came recognition. In 1972, Mrs Gandhi told the UN Conference on the Human Environment that poverty and need were the greatest forms of pollution. "How can we talk to the people in the villages and the urban slums about the need to keep air, the rivers and the oceans unspoiled when their very lives are contaminated at the source? The environment cannot be improved in such conditions of poverty."

Economic factors were recognized as the driving force behind urban inequality.

## Water

The town is a sponge. It thirsts and it drains water from what it decides are its rivers and springs. And what it pours away is dirty. Drinking water is a rare commodity and very costly if it is obtained through purification. Karachi, Mexico City and Cairo are short of water. The well-off use as much as 200 or 300 litres per day, as does Mr Average in the towns of Europe and America. But the poor have to make do with one tenth or one twentieth of that drawing it from rare public standpipes or clandestine outlets at prohibitive prices. Below the town, the drainage system (if there is one) and the river wash away water that is unfit for human consumption and full of industrial waste, detergent and nitrogen. Some rivers have become open sewers where cat-fish have replaced the nobler species and water-borne diseases are ever on the increase. Run-off stagnates in lagoons and undrained ponds, algae take over, there is more and

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(1) Extracts of an article sent to the Courier.



## DOSSIER

more malaria and the water table gets dangerously polluted.

The authorities bear a lot of responsibility here. All too often, they have worked only for solvent customers, reserving outlets for planned, supervised estates that are sold or rented at high prices. All too often, they have underestimated needs in newly urbanized zones — and politics have had something to do with the under-evaluation of the irregular populations. All too often, they have over-estimated the regeneration potential of the water table, which is drained by countless wells, tainted with sewage and uncovered by careless digging of sand pits. All too often, the rainwater drainage system has only been planned after the building of the town and been less efficient and more expensive than if the two had been done together.

And the urban problem has expanded to become first a regional and then a national problem. Water has to come from further and further away. That is something the industrialized countries realized years ago. They inventoried surface and underground water resources, reasoned in terms of drainage basins and distributed the requisite quantities according to need. They took note of thermal gradients, rainfall and reservoir capacity. They wove their networks. And the developing countries discovered all this in their turn. The Indus valley, the Tenochtitlan lake and the Mekong basin have long supported extremely efficient hydraulic civilizations. But today, time is short, money is short and rainfall is sparse and sporadic. There is nothing to suggest a miracle answer.

Yet we listened to the experts who said that we could build up a sort of buffer stock of water, which we could use liberally, by retaining rainfall behind massive, symbolic dams. But all too often, this turns out to be wrong. The reservoirs fill up. Bilharzia and the blindness that goes with it have increased tenfold around the one on the Volta and the level of water at Kossou, in the Ivory Coast, will never reach the predicted level.

The water decade, which the UN announced for 1981-90 at Mar-del-Plata, was a turning point. It was the end of knowledge transferred without precaution, it was the end of simpli-

fied foreign terms of reference and the beginning of an analysis of needs and involvement of the population. These fine resolutions have still to be put into practice.

### Air

The air in central Santiago, Caracas and Djakarta is often more polluted than in Los Angeles or New York.

There is car exhaust, of course, but there is also smoke from generating stations and factories set up in the town centres with no reference to the ecological considerations that are such a barrier for western industrialists. This situation has lasting effects and WHO is analyzing them patiently — higher mortality from pulmonary disease amongst the aged and the very young, conjunctivitis and dermatitis and slow and irreversible poisoning from the metal components (lead) in exhaust fumes.



*A slum near Lusaka, Zambia.*

Why? Because the standards now obtaining in industry in the developed world (distance from residential areas, proper purification, authorized processes, control, etc.) were not transferred to the developing countries at the same time as the technologies themselves. The multinationals are noto-

rious for altering their ecological constraints according to the country they are setting up in. And some countries, which are all too pleased to see a new factory, decline to be difficult about it and turn blind eyes to the right to work in free zones.

Competitiveness and comparative advantages force them into it. As Galo Plaza, secretary of the Organization of Latin-America States, said in 1974: "Strict environmental control is a luxury that the under-developed countries cannot afford". Does this mean that pollution and industrial development are inevitably linked?

### Fire

It is much more difficult to cook in the town than in the country. First, all the food has to be bought and cannot be stocked on the hoof or in the kitchen garden — hence the need to use it fast. Secondly, the fireplace has to be part of the house or concession, which means proper ventilation and safety precautions. And lastly, most of the fuel has to be bought.

The upshot of all this is that people in the towns spend as much as 20% of their income on firewood, the most common fuel in the world. They use everything—dead wood, green wood and recycled wood—and the areas around the towns are gradually being deforested. In Niamey and Nairobi, the caravans now have to seek their loads 50 km off.

Europe has been through the same thing. But it turned to coal and gas and electricity, thereby halting the uncontrolled felling of its forests. The wharves of London and Paris were once used almost exclusively for timber from Reading and the Morvan. Coal and gas, a by-product of the oil industry, were sold cheaply to the Europeans at the time and it was the increase in nominal incomes that made this fuel substitution a possibility.

But nothing of the sort happens in the Third World today. Bottled gas, a good solution when it comes to handiness and calorific power, is beyond the pockets of most town-dwellers. And solar energy, the so-called miracle answer, is of minimal use in built-up areas.

Many towns do not just have to cook. They have to heat too (it freezes in Mexico City and Quito and Kabul in the winter) or they have to bake bricks (in, say, North Pakistan and Egypt).

Assuming that one person needs one cubic metre of wood per year, the World Bank suggests that, in the Sahel area of western Africa, 50 times more tree-planting has to be done than at present, to meet local demand until the end of the century!

### What is to be done?

In 1950, only two cities of the Third World, Buenos Aires and Calcutta, had populations of more than 5 million. By 1980, there were 16 of them. In the year 2000, there will be 45 and over the next 20 years, the urban population will expand at four times the rate of the rural population. Given this speed, it is easy to see that no specifically urban measure has the slightest chance of bringing a lasting solution, because of lack of money. Worse still, there is a danger of some of these solutions damaging the rest of the country by cornering resources normally channelled into other fields.

A wise course would be to try to meet five imperatives .

- firstly, to tackle any urban problem within a national framework, both in terms of space (regional planning) and economic and social considerations (planning).

- secondly, to give priority to an analysis of requirements — space, clean water, health, fuel and so on.

- thirdly, to capitalize on the country's own development potential so as to achieve a genuine technological pluralism that will meet needs with minimal recourse to foreign expertise and input.

- fourthly, to produce suitable environmental standards, in the form, say, of a code for renewal of natural resources.

- fifthly, never to run any scheme without closely involving the relevant social groups.

Many schemes have been run along these lines. There is no doubt that all those in charge of them are now aware of the seriousness of the situation and of the need to do something about it. Unfortunately, there is no miracle an-

swer and any solution raises problems as to how rare resources (i.e. land, water, money and so on) should be allocated amongst the various people involved — the farmers, the town-dwellers, the producers, the new arrivals, the businessmen, etc.

So it is obviously important to keep in touch with reality so as not to fall into disharmony with the social decision-making process when the time comes for making a choice.

### A vast challenge

People today realize that any renovation or extension of urban areas must be accomplished in this sort of framework. So the prime demand is for plots where people are entitled to settle and have the opportunity to benefit from drainage, road and other networks. Official urban programmes are now designed to offer reception networks — which is why they get unreserved backing from the funders and first and foremost, the IBRD, which was quick to lend its support to pilot projects in the world's biggest metropolises. In cases of this kind, the authorities give each of the families selected a prepared plot (with a septic tank or connection to the sewage network, and usually water and electricity supplies as well) in exchange for a small amount of money. The occupant builds his own house, possibly with assistance in the shape of materials, pre-fabricated units, etc. And the result is that urbanization can be considered as a continuous process in time and space, something that offers better protection for the environment, respects minimum health standards and gets constant popular support because it is articulated round the most thriving of social forces.

But let us not get carried away. The urban battle has not been won. It is simply more pertinent and more dignified once the initial right, that of establishment, has been granted.

This is one of the essential fronts in the battle of water whereby we must have less unauthorized effluent and less spoiling of the water table. The battle is far from being won and the target of the water decade—drinking water for most people—will not be achieved by 1990 as anticipated, nor even by the year 2000. There is even some doubt that it will be possible to

clean up immense reserves such as the Chao Phaya river in Bangkok or the Laguna de Bay in Manila. Yet things are gradually taking shape. The most promising schemes are those that refer to national planning or even the international agreements for countries that share a lake or a river with their neighbours.

Atmospheric pollution is being attacked at the source — but with only modest results. It is difficult to lay down strict standards for cars when the majority of them are old. It is difficult to get industries to set up further away and do less harm. Here, it would seem better to negotiate with polluters at national rather than urban level — not forgetting that any regional development policy for a large area can disperse and weaken the effects of the most environmentally harmful industries if better regeneration of the biotope is involved.

Similarly, the problem of fuel for cooking and baking (food and bricks) and heating has to be dealt with at national level. The approach has to be in terms of needs, to start with, using all the techniques which seem to have been socially acquired. The approach then has to be in terms of economics, so as to promote policies encouraging better installations and fuel substitution of the kind that are both desirable for the nation and accessible to the households. And the approach has to be in terms of the environment, so as to protect every aspect—forest, water, soil, etc—of our ecological heritage.

There is a vast challenge facing us today. The environmental deterioration process is an old one, but it has gained breakneck speed over the past few decades. The future leaders of all the countries of the world—none of them can be spared—could take ex-Mexican President, Luis Echeverria's words to heart: "Today, we have to choose for future generations a new economic and social order that will do a fair and logical job of managing natural resources and aim at greater and fairer quality of life. Ecology must become a social science with social and economic objectives as well as biological ones. A new economic conscience has to be forged so we can preserve the freedom and dignity of mankind in a healthy environment." ○

J.-P.D.

## AFRICA

### The land crisis and facing the consequences<sup>(1)</sup>

Ecological and economic disaster, on an unprecedented scale, could be just around the corner for many African countries, as they are pushed into a trap of self-destruction. Africa's population has more than doubled since 1950 (it now stands at over 500 million) and, already, there is not enough food to go round. By the end of the century there are likely to be an astronomical 877 million mouths to feed.

As the numbers increase, pressure on the land for food and fuelwood is increasing to match, with little or no consideration for the future. The harsh consequences are already being felt.

Hundreds of millions of Africans are being forced to depend on limited or unproductive land for their livelihood. The result is that they have to over-exploit what is left, in a desperate bid to provide enough food and other natural resources for their immediate needs. They cannot afford to consider the long-term consequences—the risks they are taking in cutting off their lifelines to the future—even as the land turns to desert before their eyes.

As the deserts and unproductive land close in on them, they are being pushed into more isolated and increasingly over-populated areas. They have to eliminate fallow periods, do not rotate their crops, and work even the most marginal of land. In a matter of months they reduce and, in many cases, completely destroy its productive capacity. As the soils become degraded, the level of erosion increases and sooner or later the land turns to desert. The fertile land, with soil that has taken hundreds of years to accumulate, disappears.

The logical solution would be for them to carefully manage their land, as farms in other parts of the world have done for years. But under the circumstances land management, though

logical, is quite impractical. Without assistance, they are not in a position to consider planning for tomorrow — because their immediate survival depends on over-exploitation today.

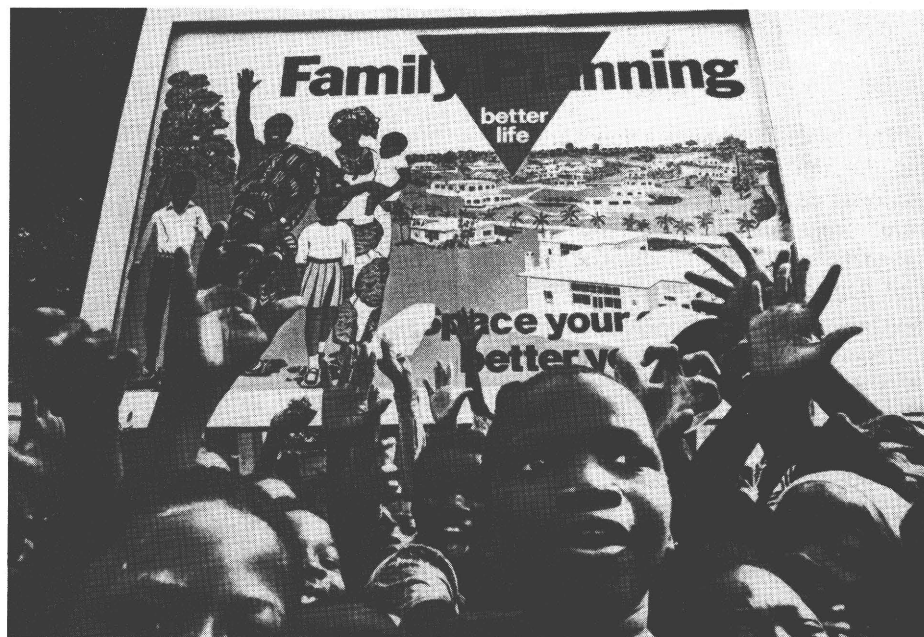
The result is more over-crowding and poverty, extensive malnutrition and sub-standard housing, a high mortality rate and widespread disease, and a land quite incapable of supporting its resident populations. As far as the people are concerned, there is no end in sight — and the worst is yet to come.

Many of them move across borders into neighbouring countries—they become “environmental refugees”—while others migrate into the towns and cities, in the vague hope of finding better living conditions there.

tening more than one third of the earth's land surface and the future of one in five of the world's population. Never before has man been confronted by desert encroachment on the scale of the last half century — and Africa has been worst hit.

The Sahara alone, during the past 50 years, has invaded one million square kilometres of land along its southern fringes, land that was once suitable for farming and grazing. And it is still rolling southward at the rate of six kilometres per year.

Usually, we hardly notice the steady expansion of deserts. Only during disastrous droughts, which give them a chance to leap forward, does human suffering become so massive that the



**A family planning poster in Africa**

*Can such planning campaigns succeed in persuading Africans to have fewer children and thus relieve the pressure on land and the ecology?*

The story is the same everywhere — basic environmental problems are putting the entire continent into a state of emergency. The African crisis is hitting hard. Soil loss, drought, desertification, urban immigration, over-cultivation and over-grazing, farming on marginal lands, rapid population growth — they are all to blame, and all irretrievably linked.

#### The encroaching desert

Desertification is in the centre of the crisis. It is a worldwide problem, affecting nearly 100 countries and threa-

outside world cannot avoid being confronted with the problem. 1983 was one of the worst years in recorded history for worldwide drought, badly hitting over half the African continent — a total of 34 countries and 150 million people.

But drought itself does not create deserts. It simply speeds up their formation and accentuates existing problems. Instead, it is man's over-cropping and over-grazing of the land that starts the process and prevents the desert's retreat when the rains eventually return.

(1) Source: United Nations Environment Programme, P.O. Box 30552, Nairobi, Kenya.

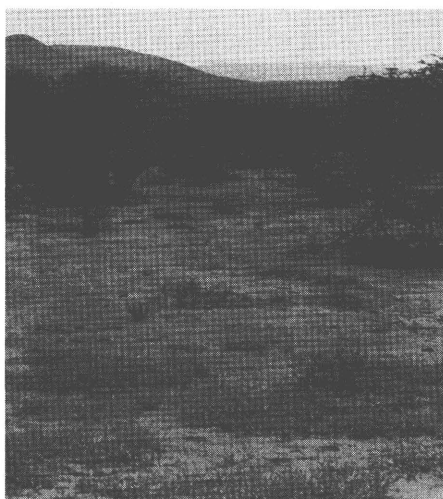
As with many environmental problems, this over-exploitation of the environment has its roots in population growth. Unchecked and increasing numbers exert an ever-increasing stress on the Earth's resources. The Sudano-Sahelian region, a band of 19 African countries from Senegal to Kenya, provides a typical example. In 1977, the population was estimated at 191 million. Today it stands at 236 million. The area is currently experiencing its third and most serious drought of the century and this, combined with the inevitable man-made land degradation in attempts to provide food, has drastically reduced the carrying capacity of the area as the desert encroaches. Adding to the problem are the enormous tracts of woodland which are being felled to provide fuelwood. The overall combination is disastrous.

### The slums

The repercussions are felt throughout the national and, very often, international community — big cities and rural areas alike. Large cities act as magnets for villagers from the remote and neglected rural areas — and they are rarely ready to receive them.

The result is that most major Third World urban settlements are being split into two. One section is for the elite, where western standards prevail, the other is for the poor. The poor areas are self-built, with a complete lack of planning or organization. They are the slums or shanty towns, where misery and growing despair prevail, where the people are denied access to clean water, safe sewage and waste disposal, medical care, inadequate housing and energy.

There are no easy solutions. Valuable time has already been lost. It is mismanagement—or no management at all— which is destroying most of Africa's resources, and current attempts to do something about it are far from satisfactory. For example, one hectare of tropical rain forest is replanted for every thirteen hectares cleared; in Africa's Sahel, the thin semi-arid strip of land south of the Sahara, tree-planting is needed at thirty times the present rate to be effective; and, in the same region, for every hectare of land going under new irrigation, one hectare of already cultivated



*Above, an overgrazed and deforested area in Botswana which sooner or later will look as barren as the area, below, in Burkina Faso*



land is going out of production due to mismanagement.

The problem can best be illustrated by attempts to halt desertification. Seven years ago, the United Nations Conference on Desertification formulated a comprehensive and feasible Plan of Action to combat the problem. It was adopted by 94 nations. But today the deserts are still expanding — and the original hope of halting desertification by the year 2000 is now impossible. The expertise to apply the Plan is available, but most of the cures have yet to be implemented.

The expertise is there, to combat desertification and to deal with other major environmental problems. Even in the Sudano-Sahelian region, with

moderate farm inputs and simple conservation measures, the UN estimates that the land could easily support a population of 406 million, which is the estimated projection for the year 2000.

But the adequate resources and financial backing are lacking, because major environmental problems are still not considered a financial priority by most governments. Relief money is not a satisfactory answer — Africa already gets US\$8 billion in aid annually.

It is essential to have long-term environmental management and guidance at the local, national and international levels. Africa decision-makers must not fall for grandiose schemes and plans without requesting an environmental assessment of their impacts, and they should channel more efforts and consideration into land management on a wide but local scale. It makes economic sense. ○

## THE CARIBBEAN

### Marine pollution: the main environmental concern in the Wider Caribbean<sup>(1)</sup>

by Nilda de FERNÍCOLA (\*)

The first use which man made of the sea may never be known; it may have been for transport or as a source of supply. However, what is certain is that from ancient times through to the present, the most important uses to which the sea has been put have been sea transport and fishing.

The chief threat to mariculture is, perhaps, the growing pollution of the

(\*) A consultant to the Pan American Centre for Human Ecology and Health.

(1) Editorial title. The Wider Caribbean may be defined as the coast and waters of the Caribbean Sea proper, the Gulf of Mexico and the Atlantic waters of Central America and Panama, the Bahamas and the Antilles archipelago, the northern coast of South America from Colombia to French Guiana and that part of the United States which borders the Gulf of Mexico.

sea; this is becoming a real problem for the fishing industry in general and in particular for coastal fisheries. Mariculture would be most successful in precisely those areas which are most threatened by pollution, particularly areas in the proximity of large coastal conurbations and industrial centres. One cannot expect that no waste will ever be discharged into the sea which, in some ways, is well suited to this purpose due to its immensity, its deep recesses, the hydrolytic and corrosive properties of sea water and its micro-organisms and the biological degradation factor. One must, however, hope that the sea will not be used indiscriminately.

The sea is a natural receptacle not only for billions of tonnes every year of dissolved chemical compounds and residues but also for almost all the materials of our industrial civilization. Once such compounds find their way into the sea, they can alter marine biological processes in such a way that the water becomes unfit for human use.

### Problems in the region.

The Caribbean region has, on the whole, a moderate level of industrialization and urbanization and, as a re-

sult, pollution of the marine environment caused by land-originating waste has not reached such an alarming level as in various other industrialized regions, although signs have been detected of localized marine pollution.

It is particularly important to assess and monitor the pollution of rivers whose waters flow into coastal mangroves, lagoons, estuaries and coral reefs because such areas, which are the region's principal source of marine production, could suffer harm from effluents. Certain authorities have subscribed to the view that the waters of the Wider Caribbean have not reached as high a level of pollution as other waters, such as the Mediterranean.

Marine pollution caused by domestic waste, principally in urban areas, is considered a problem common to the whole region and is apparent in areas close to most of the large towns and cities.

In almost all urban areas, the main drainage systems are antiquated and overloaded. The systems, in most cases, discharge untreated waste directly into the sea or onto the beaches and cause local problems of pollution.

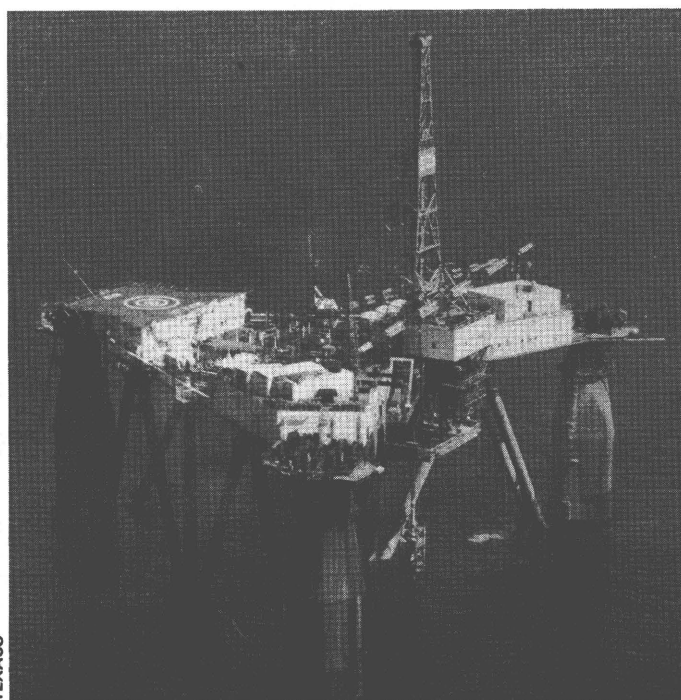
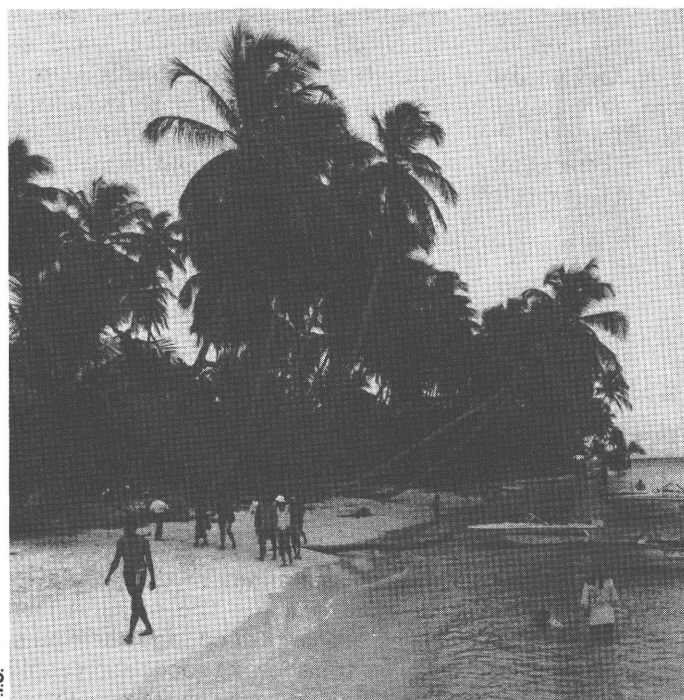
The region is, potentially, one of the

largest oil producers in the world, in terms of both onshore and offshore production. At sea, spillages may be expected as a result of broken pipelines, platform fires, malfunctioning equipment and so forth. Refineries are another source of pollution, though not on such a large scale.

Marine pollution from oil is not very widespread in the region, though problems occur in the proximity of large industrial towns and cities. Tourism and fisheries are the industries chiefly affected.

The production, processing and transportation of crude petroleum and its by-products are the chief economic activities. Moreover, the strategic position of the Caribbean region in relation to the major oil producers in the Middle East and the biggest consumer market in the shape of the United States makes oil and its by-products an even more valuable commodity. Daily oil shipments amount to approximately five million barrels and, at any one time, some 200 tankers are between ports, of which at least 50 are large crude carriers.

The transportation of crude petroleum or refined products can therefore be a further source of pollution



Left, a beach and, right, an offshore oil rig in Trinidad and Tobago. Both are significant assets to the country, but the latter is a threat to the former

*Marine pollution from oil occurs mostly in the proximity of large industrial towns and cities in the Caribbean. "Tourism and fisheries are the industries chiefly affected"*

through accidents, and pollution on the beaches of the Caribbean and the Gulf of Mexico may also result from the discharge of wash water from ships' tanks.

Experts in environmental questions have in recent years drawn attention to the threat to marine life and the associated food chain posed by the chemical compounds and other waste products released into the sea by oil companies in the course of drilling for gas and oil or onto the continental shelf, chiefly in the Gulf of Mexico. A study of the situation shows that the risks, which apply in limited situations, are minimal.

Oil pollution on the beaches of the smaller Caribbean islands caused by shipping is a problem which has adverse effects on tourism.

Industrial growth in the region will inevitably increase the risk to the environment unless suitable steps are taken in time, including early selection in the case of future industry siting and the application of suitable waste treatment and appropriate technology for its ultimate disposal.

Liquid effluents from industrial plants such as sugar refineries and rum distilleries, which contain a high concentration of organic compounds, are a further source of marine pollution.

Other pollutants, such as heavy metals, polychlorinated biphenyls (PCBs) and other chlorinated hydrocarbons, may be present in the environment, particularly in coastal areas close to industry.

Industrial waste on land and waste discharges from ships must be carefully monitored in order to avoid adverse effects on health and protect tourist areas, fisheries and coral growth. It must be emphasized that it is very costly to clean up an area that has been polluted, for example, by an oil spillage, quite apart from the financial losses suffered by tourism.

Single-crop farming, of crops for export, has been the main economic activity of the majority of the Caribbean countries in the last hundred years, although some of them have minerals which they export. With the modernization of agriculture, the use of pesticides and other chemical products intended for the same purpose can be expected to go on increasing and it will therefore become necessary to determine what effects such chemicals will have on the tropical ecosystems of the Wider Caribbean.

### Effects of pollution

On 3 June 1979, an explosion occurred on the Ixtoc I oil-rig in the Bay of Campeche, which was brought under control only after 290 days, having spilled 475 000 tonnes of oil into the Gulf of Mexico. The total damage caused is still unknown.

Coastal underwater vegetation is both an important source of food and the habitat for many species of fish, although little has been done to protect it. Its tendency to grow near the coast, where waste material frequently finishes up, has meant that this type of

vegetation has vanished from certain areas of the region, especially in the proximity of urban centres. There is a need for the Caribbean countries to agree on guidelines aimed at rehabilitating this type of vegetation in order to preserve it in the interests of future fisheries exploitation.

There have been a number of cases of fish and shellfish poisoning in the region, some of which were associated with pesticides, though there is limited information available concerning the effects of pollutants on marine organisms and ecosystems in the Wider Caribbean.

In 1981, 23 out of 28 Caribbean countries, territories and islands subscribed to the Caribbean Plan of Action, an exemplary event in the context of regional cooperation, especially considering national historical differences.

The Plan, which concentrates purely on environmental control, could prove to be the region's greatest ever achievement.

The Caribbean countries on that occasion selected eight projects out of a total of 66 to be initially undertaken involving river basin management, oil spillage control and campaigns to create public awareness of the issues concerned and assess the environmental effects of pollution. The work already begun will undoubtedly help to avoid the effects of the region's most common pollutants on all forms of life — animal, vegetable and human. ◊

N. de F.

## THE PACIFIC

### Striking a balance between conservation and development<sup>(\*)</sup>

The South Pacific has often been viewed from outside as a tranquil tropical paradise. Beneath that superficial view, life in the Pacific Islands is, in fact, dependent on a remarkably fragile environment, characterized by limited natural resources, including land, and a high incidence of natural disas-

ters. Traditional cultures emphasized wise environmental management, thus permitting a quality of life that was traditionally higher than many other subsistence societies. Now, however, traditional island communities face the consumer age, industrialization, urbanization and, in some areas, unprecedented population growth. All these factors are putting a lot of stress on their environment. The challenge

of today is to find the balance between conservation and development of the Pacific environment in the interests of bettering the quality of life of Pacific peoples.

#### Marine, air, land and river pollution

The sea is vital to the life and development aspirations of the peoples of the South Pacific. The ocean is their major source of food, and their highway for transporting goods and people. The potential earnings from both living and non-living marine resources offer some of the Pacific Island states their only hope of reaching a reasonable degree of economic viability.

(\*) Source: SPEC (the South Pacific Bureau for Economic Co-operation). Editorial title.

Keeping the marine environment in sound condition is a major interest. The Pacific has so far escaped major or widespread marine pollution incidents, though contamination has occurred through man-made persistent chemicals, oil spills from port accidents, leaks in pipelines or storage depots, shipwrecks and nuclear testing and dumping. As tankers of some size deliver oil supplies to the region the risk of major oil spillage is certainly present. There is pressure from some quarters for continued dumping in the Pacific Ocean of nuclear and other toxic wastes originating in the industrialized countries. Such dumping creates a risk of contamination particularly through ocean food chains. Mining of ocean floor minerals and off-shore oil-exploration also pose potential pollution dangers while discharges from industrial works, mining, sewage plants and other land-based sources are increasingly having an impact on shore, mangrove and reef areas.

With regard to resource management, the key area is fishing, which traditionally concentrated in lagoons and on the reefs, but which has now moved dramatically in favour of deep water fisheries with the emergence of sophisticated technology and equipment. The available fish resource has, therefore, increased but so has the need for its proper management. Increased on-shore processing of off-shore catches and in-shore catching of live baits are also activities that raise environmental concerns in the region.

The South Pacific, compared to other more densely populated and industrialized regions, is largely free from air pollution.

However, the growth of industries in some areas and concentrations of population, give rise to some increased air pollution though localised in nature. Nor is the Pacific quite free from other forms of atmospheric pollution which may be dispersed by wind and then brought down again with the rain. Atmospheric pollution from above ground nuclear testing was the principal form of such pollution in the past.

By far the commonest environmental problems in the region are associated with the land. Most of the is-

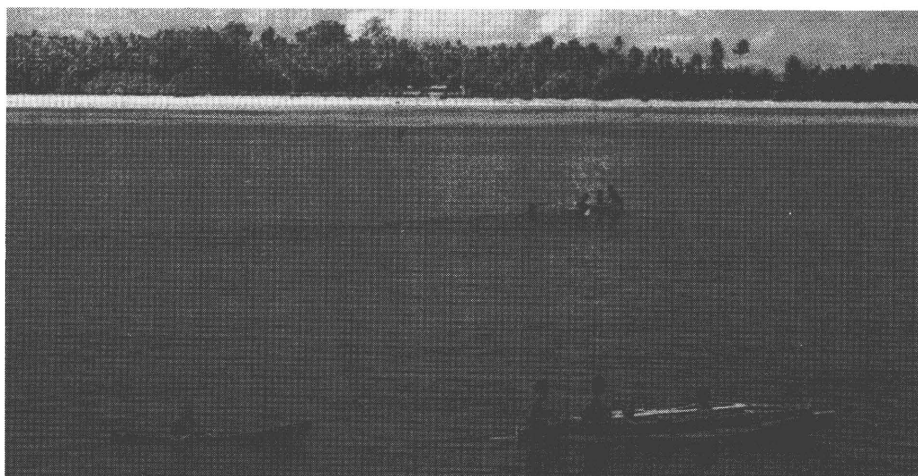
land countries in the region, because of limited land area, have inherent environmental problems peculiar to small islands. For example, up to 60% of the countries in the region reported problems in disposing of solid wastes, particularly cars, appliances, cans, bottles etc. as disposal sites for these non-degradable materials are limited. Disposal of liquid wastes, particularly human waste, is also a major problem giving rise to high consequential health risks.

Increasing populations on limited land areas create problems of water supply and quality, sub-standard in-

tal consequences. Increasing use of toxic chemicals in agriculture, as a means of controlling disease-carrying insects and as a weed killer, risk pollution and the creation of residues in food crops.

Actual landuse, although efficient and contained in the traditional past, is now less easy in the face of population growth and modern development requirements. Inefficient use of limited land area is a problem in itself and also creates further environmental problems for many of the islands.

Even those island countries blessed with sufficient land area and tropical



**Fishermen off the coast of Honiara in the Solomon Islands, above, and below, their catch.**

*The people of the Pacific depend mainly on the sea for their livelihood. Destruction of marine life through pollution is tantamount to a death sentence on the people*

sanitary housing, and the destruction of the environment particularly coastal areas near urban centres.

There are also considerable risks emanating from the use of toxic chemicals. Many small accidents have already occurred in the region but since, until recently, there has been inadequate monitoring of toxic chemicals, their effects have not been really determined. Storage of toxic chemicals is a problem in the Pacific. There tends to be an over-supply of chemicals of all sorts and countries in the region generally do not have the capacity to adequately store or dispose of unwanted chemicals. Drums have rusted and leaked into soil and groundwater, cyclones have destroyed and spilled agriculture stores, and chemicals have intentionally been poured or used unwittingly as a means of disposal, polluting and causing grave environmen-



rain forest are beginning to feel the impact of man's quest for development. Much coastal and lowland forest has been converted to other uses and there is increasing forest clearance at higher areas. With the destruction of forest cover come problems of erosion, loss of soil fertility, soil compaction by heavy equipment, lack of adequate forest regeneration, and the expenses and difficulty of re-forestation. Forest clearance also interferes with the recharging of groundwater reserves, and increases the risk of contamination accidents. Water catchments cleared of vegetation often have inadequate supply during long dry spell and are easily polluted.

Ore mining, and pollution associated with it, is also a problem in certain countries in the South Pacific. The most common form of mining is for sand and gravel for construction purposes. As sand and gravel are in limited supply in most of the islands, their extraction leads to beach erosion, or, through the dredging of sand and coral from the reef or lagoon bottom, to the destruction of fisheries resources and to pollution.

The commonest forms of river pollution come in the Pacific, as elsewhere, from industrial wastes and effluents from households. In countries where some form of mining or excavation operations take place, rivers have become all-too-convenient means of discharging of mining wastes and displaced solid materials. The rivers themselves and their estuaries then become clogged with silt which in turn affects breeding grounds of fish and molluscs.

### Remedial efforts

At the 1976 meeting of Prime Ministers of the South Pacific Forum it was decided that the South Pacific Bureau for Economic Co-operation (SPEC) should consult with the South Pacific Commission (SPC) with the aim of preparing proposals for a co-ordinated regional approach to the problems of environmental management. The same year, the South Pacific Conference endorsed the suggestion and directed that a comprehensive environmental programme reflecting the environmental interest of all countries and territories in the region be jointly prepared by SPEC and

SPC. Countries were also requested to prepare a review and overview of their environmental problems and suggestions on elements which should be included within the programme. Following this, two major technical meetings were held in 1980 and 1981 and, in March 1982, the South Pacific Regional Environment Programme (SPREP) came into being when it was adopted together with a Plan of Action at a Ministerial level Conference on Human Environment in the South Pacific held in Rarotonga, Cook Islands. The Plan of Action provides for further assessment of the environment in the region, improved national legislation and regional agreements on environmental issues, and development of management methods suited to the needs of the region. Another component aims at strengthening national and regional capabilities and institutional arrangements in a region with limited scientific environmental expertise or infrastructure.

The 21 participating states and administrations also signed a 14 point Declaration on Natural Resources and the Environment. The main thrust of this declaration is national management and conservation objectives, but it also included two paragraphs on controlling radioactive discharges, viz: "The storage and release of nuclear wastes in the Pacific regional environment shall be prevented", and "The testing of nuclear devices against the wishes of the majority of the people in the region will not be permitted".

The development of the Plan of Action takes place under the policy guidance of the Co-ordinating Group comprising SPEC (Chairman), SPG, UNEP and ESCAP which reports regularly to the South Pacific Forum and Conference. The Secretariat for SPREP is situated in SPC. UNEP has provided the bulk of funding for the initial stages of the programme, but contributions from member countries of the programme are providing an increasingly important part of the budget.

### Outlook for the future

Since the implementation phase of SPREP was inaugurated in 1982, a number of priority areas have been given emphasis. These include the convening of legal experts meetings to

draw up the Convention for the Protection and Development of the Natural Resources and Environment of the South Pacific Region and two protocols, one on the prevention of dumping and another on combating pollution emergencies. Discussions on these legal instruments is expected to be concluded in September 1984 and a plenipotentiary conference will be held in 1985. A review of artificial and natural radioactivity in the region was also undertaken and a report has been circulated for the benefit of negotiators.

Two networks provide a framework for activities and projects within the Programme. They involve open-ended membership of government and non-government organizations. One network deals with environmental research, monitoring and assessment, and is currently engaged in projects dealing, for example, with coastal and inland water quality, pesticide use, soil erosion and sedimentation, natural resource surveys, coastal environmental management and oceanographic conditions. The second network is concerned with education, training and information exchange and involves, as priority tasks, increasing community awareness of environmental issues and strengthening environmental content in school curricula. The first task is being pursued through radio, and other media aimed variously at all sections of the community.

Specific consultancy work and projects in a number of countries have also been commissioned by the SPREP Secretariat. These include the examination of specific problems relating to mangroves ecosystems, reefs, water quality, pesticides, impact of large-scale mining, oceanography and so on.

While the Pacific Ocean divides the South Pacific countries, it also unites them, in a single environmental system. Waves, currents and weather do not respect national boundaries and any major alteration or contamination of them could have widespread effects. In the SPREP Plan of Action lies the region's hope for control, conservation and development of its environment; only when those objectives are achieved will the South Pacific be able to truly boast that it comes close to paradise. ○



# The administration of small gold producers

by John HOLLOWAY (\*)

In the turbulent minerals markets of the past ten years, only gold amongst the major products, has dramatically increased in real value (see table). However, generally little advantage has been taken of this fact by Third World countries, particularly in Africa, even by those which in colonial times possessed a significant gold mining sector.

The reasons for this failure to develop such a valuable resource are varied.

During the 'Decade of Development'—the 1960s—the price of gold was still being held at the artificially low official price level of US \$32 per troy ounce, or about a dollar a gram. The mining companies engaged in this activity at the time were generally on borderline profitability as a consequence, and their capitalistic philosophy looked askance at the socialist-oriented successors to the colonial administrations. These suspicions were often founded, for higher taxation (and sometimes outright nationalization) frequently turned faltering enterprises into bankrupt ones.

New governments and their attendant administrators had little knowledge of or sympathy with the mining industry and national priorities were generally in favour of agriculture and industry.

The main development aid donor countries were experienced more in large base-metal, coal and iron mining projects, and had little to offer in the way of skills for small gold mines in remote tropical areas.

Philosophically, gold mining is an activity that lacks the moral quality that accompanies the mining of 'useful' metals like copper, coal or iron. Its industrial uses are of little value compared to its unofficial status as the world's 'reserve currency'. The glamour that is associated with gold mining is of quite the wrong sort to encourage the use of development funds in this sector.

The foundering economies of many potentially gold-rich Third World countries

have often resulted in over-valued currencies, pushing up input costs to the mining industry and holding down its revenue to the point where the potential profitability of gold mining is lost.

## Thriving illegal mining

Despite these factors, gold mining of a sort is thriving in many Third World countries. This is illegal mining, outside the sanction, control and often knowledge of the administration. Local people using crude methods extract gold from remote alluvial and reef deposits for sale to a black market of buyers who pay for it at prices more nearly approximating the true value of the local currency. In Africa, this gold travels through a network of middlemen back to West African centres such as Freetown, Lagos and Accra, from where it vanishes into ships and aircraft travelling to Europe, and the Middle and Far East.

Attempts by Governments to stem this haemorrhage of a valuable resource by illegal mining have seldom been effective.

Even where attempts at control have been reinforced with a "carrot" (free technical services and/or higher prices for locally produced gold) the results have frequently been disappointing because of inappropriate technology or clumsy payment procedures. Basically, there are two aspects to the problem of changing a crude and illegal industry into an efficient and legitimate one. These are the technological difficulties and the financial

Major metals: Average commodity prices  
1972-1982  
Deflated by U.S. wholesale price index  
Base = December 1982

Commodity	Unit	1972	1982	% change
Gold	\$/t.oz	155	379	+245
Aluminium	\$/t.	1 538	1 785	+116
Copper	\$/t.	2 860	1 494	- 48
Lead	\$/t.	805	550	- 35
Nickel	\$/lb.	3,7 *	2,4	- 35
Silver	\$/t.oz.	4,5	8,0	+177
Tin	\$/t.	10 055	12 940	+128
Zinc	\$/t.	1 008	751	- 25

Source: Mining Annual Review, 1983.

\* 1973 value.

obstacles, of which the latter is the less amenable to solution.

## The nature of deposits

The technical problem arises from the nature of the deposits suitable for small-scale operations. Gold comes from reefs of volcanic origin, but the current major sources of supply, South Africa and Russia, get their production from 'paleoplacers' — accumulations of gold transported and concentrated by water action and deposited in beaches and gravel beds, now long-buried. The gold miners of the Klondyke and the Forty-Niners were after more recent deposits of the same type.

Where natural concentrations of gold in surface deposits are found, nature can be improved upon by using simple 'gravity' methods such as panning. These alluvial deposits are normally low grade, requiring much arduous work squatting by the water and panning many successive quantities of gravel to obtain a tiny yield of fine gold. Only the remote chance of a bonanza—a big nugget or an unusually rich area—makes this exhausting work worthwhile. Something can be done to improve the method of operation—for instance, the use of hessian-floored strakes or channels, down which the water flows mixed with gravel, the gold being caught as it slides along the rough bottom—but the limited sources of gravel along a typical length of river means that the contrivance must be frequently moved or that paydirt be laboriously brought to it.

(\*) Process Consultant, Small Mines Technology Transfer, Harare, Zimbabwe.

## “Where there is gold there are thieves”

The most productive areas for small mines are normally not the alluvial gravels but the original reefs from which the gold came. These are found in the granite backbone of the continents, and their presence is known in many developing countries — amongst them some of the poorest in the world. Upper Volta, Ghana, Tanzania, Zimbabwe and Zambia, are a few of those possessing economic gold reefs. ‘Where there is gold there are thieves’ goes the saying, and to a greater or lesser extent all of these countries are having their legitimate assets robbed by the activities of gold smugglers.

Local miners, whether legal or not, usually lack the capital and skills to undertake more than the mining of the upper thirty metres of exposed reef, and even here much ore is often wasted. In any event, without explosives their activities are limited to the topmost soft and oxidized zones of the reef, and without power the amount hoisted is restricted to that capable of being lifted by hand or, on occasion, draught animals.

### Practical difficulties

On the treatment side, water is necessary for all effective gold separation processes. Without official help, this limits the development of potential reefs to areas within a few kilometres of a water supply. Ironically, the miners themselves are often halted by the appearance of ground water.



*Crushing the broken ore in grain mortars, using axle shafts*

The methods used by local miners for separation of the gold are normally limited again to those dependent on the very great density of the metal—pans and strakes. Since part of the gold is of a size too small to be collected by this method—below one twentieth of a millimetre—much is lost, perhaps on average about half of the total.

### Solutions

These practical drawbacks can be overcome with a modest amount of equipment and some good advice. However, the conventional sources of assistance to developing countries

have not achieved many successes in this area. Modern large scale mining and metallurgical practice is often quite unsuited for use with the limited resources of local miners and the tiny scale of their operations.

Thus, for instance, the efficient size reduction of ore has evolved into a multi-stage process, culminating in a ball mill for fine grinding. While efficient, the units in this sequence require a steady and well-sized feed for satisfactory operation, and their use for an operation handling only 10 to 20 tons a day would normally be uneconomic. For such cases there is much to be said for the venerable stamp mill, which can reduce ore of over 10 cm in diameter down to half a millimetre in one stage, and which is fairly insensitive to the vagaries of being hand fed.

Depending on the ore, the extraction method can frequently be made simpler and more efficient by using simple static gravity methods after the mill, or by mercury amalgamation followed by cyanidation of the heaped tailings. The danger of using such chemicals in those circumstances has been somewhat exaggerated; mercury amalgam has a very low vapour pressure compared to the pure element, and it would take a determined man to poison himself with the dilute cyanide solution used for heap leaching, as over a glassful would have to be drunk. In addition, the antidotes to cyanide poisoning are simple and cheap. Given a modicum of instruction and control there seems no reason why technical problems should inhibit



*Sieving ground ore to obtain a fraction suitable for sluicing*



*Sluicing, with sacking on the strakes as a collecting surface, to produce a gold concentrate on an African river*

the recovery of gold from the surface ores treated by local miners.

Some practical help is also needed on the mining side — for instance, the proper application of timbers for supporting the 'open stopes' or deep trenches favoured by local miners, the use of simple hoists to raise the ore and the introduction of methods of safely extracting ore at greater depths than open stoping allows.

A local assaying facility is needed both for giving direction to the miners' activities and for enabling rapid and accurate payments based on the gold content of the bullion produced. Contrary to popular belief, satisfactory assays can be obtained without the use of electric power, by using furnaces fired by charcoal or wood, and with a sturdy torsion-wire balance being the most delicate piece of equipment used.

### Controlling gold production

However, while there are no major obstacles to introducing suitable methods and technology to assist the output of local miners, the effective entry of the state into competition with the illegal gold buyers frequently requires difficult decisions to be made at the highest levels.

In order to arrive at a fairly workable solution while avoiding the larger question of a realistic national currency devaluation, it is worth looking at the situation through the eyes of an illegal miner. He is seldom working entirely alone, most often being a member of a very small group that specialises in some aspect of the operation — mining, transport, milling, panning, amalgamating, etc. The overall operation is usually overseen by a gold buyer or his agent, who provides mercury for amalgamation and arranges the distribution of the payments to the workers.

Despite the value of the product, few illegal miners are wealthy. The combination of high cash payments and limited supplies in a remote area lead to extreme inflation locally over and above that inherent in any overvalued currency. Prices the (official) equivalent of US \$ 20 or more are demanded, and obtained, for a bottle of beer or a small bar of soap.

Hence to the local miner, it is not what he is paid for his gold, but what

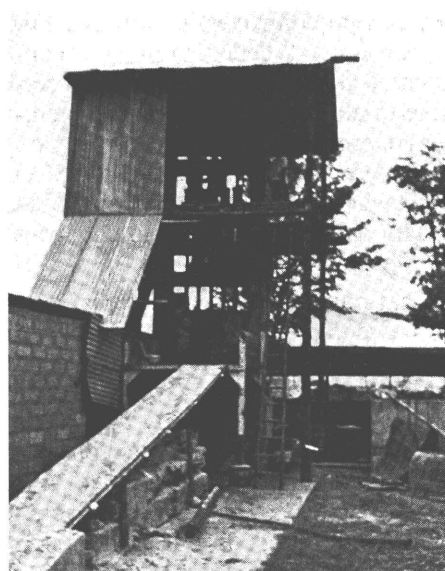


*Amalgamating the gold concentrate with mercury by rubbing in a fine cloth*

and how much he can buy with the payment that is important.

### Reverting to the ancient system

There is therefore a case for a reversion to the ancient system of a trading store at the workings, empowered to acquire gold (at a price high enough to bring it into close competition with the illegal buyers) while at the same time selling equipment and supplies to registered miners against the credit



*A mill handling 15 tons of ore daily*

their bullion deposits have given them. Since Third World countries that possess such gold deposits are usually socialist in orientation, a system of state trading stores selling at controlled prices is frequently already in existence. It would be a fairly simple matter to link the activities of such a store with those of the mining control and gold producing functions.

Of course, this system will be subject to abuse as much as any other; in a region starved of commodities it is likely that the miners will engage in the over-purchase and the re-selling of items to other inhabitants. However, it does at least ensure that the main governmental objective, that of bringing the foreign currency-earning value of local gold production into its control, is achieved.

It is with gold more than any other commodity that the folly of overvalued currencies can be seen. A product that would normally be one of the best supports for a currency is instead lost to the national exchequer while at the same time the purchasing power of the illegal miners leads to distortions in the distribution of scarce consumables, while the need for security personnel leads to a further drain on public funds. ○

J.H.

## Artistic heritage: two viewpoints

Since 1978, an intergovernmental committee, created and supported by UNESCO, has used its good offices to assist in settling requests from countries, mostly in the Third World, for the return of works of art and other cultural property taken from them, most often while they were under foreign domination. The work of the committee is in keeping with UNESCO's goal that countries should recover objects that are an important part of their cultural and historic heritage and of bringing this about in a spirit of international co-operation.

Probably the best known current dispute over the return of works of art to their country of origin concerns the Elgin Marbles. These are sculptures from the Parthenon in Athens removed by Lord Elgin, then British ambassador to the Ottoman Empire, and taken by him to England. They were eventually acquired by the British Museum and today are one of its most admired treasures.

In the following articles, published in the Council of Europe's quarterly, *Forum*, a British and a Greek Member of the Council's Parliamentary Assembly, David Atkinson and André Kazazis, present their views of the controversy.

### Legally acquired and paid for

by David ATKINSON

It could be argued that the first displacement of a work of art was the occasion of original sin itself—the Big Apple—for which we have been paying the price ever since. Today, museums in Europe and North America are full of items acquired legally, dubiously, or stolen outright over the centuries. Often they are there through such complicated changes of fortune of the previous owners that any serious suggestion that they be “returned” would provide a field day for international lawyers.

For example, whereas France was forced to return the four bronze horses to St. Mark's, Venice, after the defeat of Napoleon (who was even worse than Marshal Goering in pinching things for his private collection), was it not the Venetians who stole them from Constantinople in the first place—when crusaders sacked the city in 1204?

First attempts to rectify such situations came in dealing with the Napoleonic booty at the Congress of Vienna in 1815. Much more recently, the 1954 Hague Convention ruled that cultural property misappropriated in wartime

should be returned under international law. The 1970 UNESCO Convention dealt with illicit trade, and since 1978 a twenty-member Intergovernmental Committee has been meeting, with Council of Europe observer participation, to promote the restoration to developing countries of works of art removed during the colonial period.

### Unique

While Senator Tummers, who presented the report on the subject by the Assembly's Committee on Culture and Education, wisely stayed clear of any current controversies within a European context, believing that our continental heritage remains easily accessible to all, his resolution asked member governments to co-operate fully on a bilateral basis—through UNESCO whenever possible—for the return of certain cultural properties to countries elsewhere in the world.

That much was wholly acceptable to the Assembly. But the Elgin Marbles anywhere else but Athens was not, in the view of Greek and Cypriot speakers, who were surprisingly supported by a member of the British House of Lords, although he appealed for the Athens smog to be controlled first. They were, of course, repeating the much publicized appeal by Melina Mercouri, the present Greek Minister

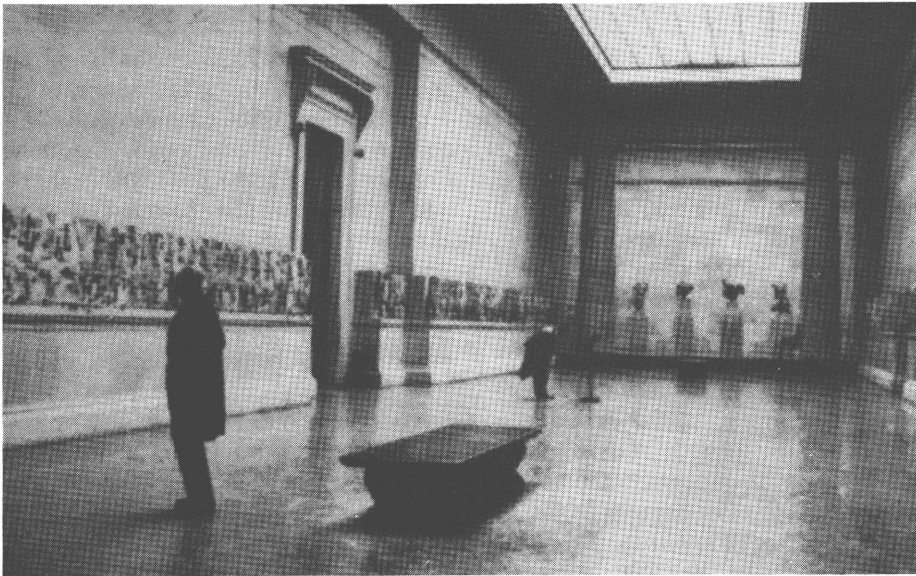
of Culture—herself a former member of the Council of Europe Assembly—for their return. This reflected the recommendation on the Return of Cultural Property to its Country of Origin that had been submitted by Greece to the UNESCO World Conference on Cultural Policies in Mexico in 1982 and adopted. This said that the removal of the Marbles had disfigured a unique monument and recommended that they be returned “for reincorporation in the architectural structure of which they formed part”.

### Empty museums

The British reaction to Madame Mercouri in Mexico was, in effect, “Never on Sunday, nor any other day of the week”. And it was repeated at Strasbourg. The three MPs who spoke pointed out that such a return would set precedents which would be unacceptable. For example, the return of the Mona Lisa to Italy, Impressionists to France, the Venus de Milo and the Winged Victory to Greece, too. Where would it all end? Whole museums would be emptied. So much for the unity of European culture!

They pointed out that, but for Lord Elgin, there would be no Parthenon marbles today. He had saved them for an uncertain fate at the hands of stone robbers, lime burners, curio hunters and religious iconoclasts and smog! And he had legally acquired them and paid for them with the full consent of the (Ottoman) government of the day. Furthermore, the Greek Government had no intention of implementing the UNESCO recommendation. Far from being reincorporated into the Parthenon they would be placed in a museum which had yet to be built. Surely, if any request to the British Museum for the Marbles' return is to be fair, there should be similar requests to all nine museums—including Strasbourg University—in all six countries where the Parthenon Sculptures are now divided.

So the controversy lives on. Surely, though, the Greeks already have the answer. They have recently replaced the caryatids supporting the Erechtheum on the Acropolis with replicas. Could they not accept the same for the Parthenon? o D.A.



*Lord Elgin's controversial collection*

## Thefts, donations or sales?

by André KAZAZIS

Should works of art be returned to their country of origin? There are many sides to the problem—political, legal and cultural, not forgetting the relationships of peace and friendship among peoples. Not all these aspects would seem at first sight to be directly connected with the subject of this article, yet none can be dealt with as a priority since they are, more than ever, intimately linked.

The problem is a political one because the question of the return of works of art is based on a political foundation which differs radically from the ideas prevailing at the time when the countries of origin were robbed of their treasures. The theft of works of art, which constitute the cultural heritage of nations, is a phenomenon contemporary with the appearance of the first artistic objects worthy of being described as works of art. However, immediately after the Second World War, with gradual decolonization, which is seen as not only a political process but also an intellectual and cultural process, the trend was for relations between countries to be re-established.

At the same time those states which are outside the group of developed countries are coming to question the very meaning of the word "developed". Many of them argue that the

undeniable superiority of the developed countries in terms of industrialization and economic development does not necessarily put them in the forefront of political and cultural development.

So in the light of the new political and cultural concepts which have developed, how can one still justify these thefts of works of art morally, politically and culturally? It is their very legality which is challenged. (Thefts, "donations", "sales", etc., had an appearance of legality in an age when people were sold as slaves!).

But viewed in historical terms the relationship between people and between peoples shows that the achievements of the past have some measure of permanence and that the old does not necessarily vanish to be replaced by the new.

This raises a question: should the return of their property to those who have been deprived of it become an absolute rule in efforts to restore the cultural balance? I hesitate to answer that question, for the historical process is far from simple; the theft of works of art did not take place in isolation but implied a reciprocal relationship between thief and victim, and familiarity between the two. The cultural development of peoples does not generally take place without mutual assimilation of colonized and colonizers. Greek history offers us numerous instances of this. The Hellenist period offers one example of the extension of a culture which spread beyond Greece's frontiers to conquered countries and left its mark on them.

## Authentic expression

These considerations suggest that there can be no question of stripping museums of their treasures, or even of envisaging international exchanges. But let us beware of generalization.

Certain creative works of art cannot be categorized exactly but are, on the contrary, representative of the cultural heritage as a whole because of the extreme diversity of the elements blended together in them. This is particularly true of works of architecture which are so closely bound up with the life of the people who created them as to constitute its most authentic expression. They are a reflection of the nation's cultural level. The same cannot be said of works not destined for public use or those intended to give aesthetic pleasure. As for temples, which express all the spiritual values of the people who built them, they usually constitute the most complete aesthetic expression of their age.

Moreover, by dint of their survival over the centuries, buildings are proof of a culture's continuity; rooted in the past, they help us to retrace the identity of the people who created them and enable neighbouring nations to understand them more fully.

Understandably, it was not my intention to raise the subject of the Parthenon marbles stolen by Lord Elgin and taken to London, but how can the matter be dealt with without giving an actual example?

The Acropolis is the most perfect expression of Greek civilization at its height. Its monuments are witness to the triumph of the Greek mind over barbarian forces. The Parthenon cannot be thought of except under an Attic sky, nor the rock of the Acropolis outside the mellow setting of the Mediterranean landscape. This monument of classical architecture is an integral part of the day-to-day life of Greeks, particularly Athenians. Mutilated or moved elsewhere, it ceases to exist. It is and must be a monument to the European cultural heritage. Unfortunately, in its amputated form, it loses part of its unique character; as for the cultural communion between the temple, its natural surroundings and the people who speak a language so close to that of its creators, it is denatured. Thus, far from being strengthened, European cultural communication is weakened and degraded by such "amputation". ◊ A.K.

Mario BETTATI — *Nouvel Ordre Economique International* (New International Economic Order) — PUF (Que sais-je? collection) 108, bvd St-Germain, 75006, Paris, France — 128 pages — 1983

Local wars, not without their international influence, have been a strong feature of the past 15 years. But, at the same time, there has been a vast increase in the number of international peace conferences and, in particular, conferences on economic relations between the industrialized nations and the countries which supply the raw materials and the energy, i.e. the developing countries.

These latter conferences include the one on the new international economic order (NIEO) launched more than 10 years ago. Its aim, according to the developing countries which promoted it, was to guarantee the developing countries' rights and consolidate their economic sovereignty in face of the industrialized countries whose industrial model was founded essentially on the existence of peripheral places supplying energy and raw materials and not therefore having the industrial economy that is a factor of independence and power.

Bettati starts by pointing out the contradiction between a state's sovereignty over its territory and its sovereignty over the resources of that territory. Sovereignty over resources has long been limited by the prevailing international law which put priority on the demands of freedom in trade. The great NIEO texts, Bettati explains, have completely changed the data of the problem. What is the situation now?

The writer outlines the history of the international law regulating economic relations between the industrialized and the developing worlds. He notes that the law is still to the rich countries' favour, but that the developing countries in the North-South dialogue are increasingly altering the "recognized" principle, if not the practice, of the matter. So, in the sensitive area of nationalization, the developing countries feel that, if there is any compensation to be paid as part of the North-South dialogue, it is the developing countries which ought to get it, in accordance with the provision in

the declaration on the establishment of an NIEO that proclaims that it is the right of every state, territory and nation under foreign occupation, foreign domination, colonial rule or apartheid to obtain restitution and total compensation for the exploitation, reduction and deterioration of their natural resources and all other resources of these states, territories and peoples (Res. 3202, May 1974). Of course, Mario Bettati says, we cannot yet meet all the developing countries requests, but we can expect a movement of opinion and attitudes to emerge and gather strength. The same goes for the sovereign choice of political, economic and social system in each state, even if, here again, in spite of the NIEO being proclaimed, certain countries and individuals are trying to further their own interests rather than the interests of the developing countries as dictated by the new approach to international relations.

In conclusion, the author thinks that, in spite of the imagination of international officials and the work of the UN bodies, there has not been enough progress with the NIEO. The absence of any political will to achieve it in the industrialized countries is the main reason for failure and, of course, the developing countries' lack of political maturity which would enable them to forget or overcome the divergence inherent in their diversity.

Although this book ends on a note of failure, it is interesting because it gives us a better grasp of the process that has led to the NIEO's lack of success. Should not the outcome of this be new will in the developing countries?

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Hilde EYNIKEL — *Congo Belge — Portrait d'une Société coloniale* (The Belgian Congo — Portrait of a colonial society) — Editions Duculot — 310 pages — BFRs 695 — 1984

This is no doubt the first post-colonial work on the colonization of the Belgian Congo written without complacency or false shame. More than a quarter century after independence, the time has in fact come for a first assessment of this era, now gone for ever, of Belgian history.

Belgium has always kept its distance

from its colony. The work of the pioneers never won any great admiration, yet, after the difficult times of the Independent State of Congo, the new Colonists were to be busy with a thorough reform of the colonial system and lay the foundations of the infrastructure, the economy and a modern social system. The colonial achievements are of course open to criticism, but it would be wrong to have too romantic a vision of the precolonial period. The colonial era has to be set in its historical framework and cannot be assessed by the criteria of the 1980s.

The author of this book holds a degree in contemporary and Slavonic history and works as a freelance journalist specializing in the Middle East, Eastern Europe and Africa. Here we see her as a journalist and writer and her work is flexible and lively and contains many original quotations and more than 300 illustrations from the archives in the Musée Royal de l'Afrique Centrale, the Musée de l'Armée, the Pères de Scheut, the Zairean embassy in Brussels, the KUL library and many private sources, bringing to life the Belgian Congo saga, which began with Livingstone's first discoveries and the dreams of Leopold II and ended with the declaration of independence in 1960.

With her, we gradually discover a society that represented the ideas and the ways of its time, the good and the bad, the idealistic and the rapacious.

She is faithful to her historical sources, but her objectivity is tinged with astonishment, common sense, seriousness or humour by turn. The picture she unfolds is a colourful one. It shows the everyday life and great achievements against a background of the bush and towns called Leo and Boma and Stan and E'ville where, for our pleasure and our emotions, the pioneers, the colonizers, the white women, the territorial officers, the soldiers, the big companies and the missions... and more... file past. In a word, she shows us all those people who, for almost a century, made the Belgian Congo what it was and combined to write those pages of the history of Belgium and of that great country that became Zaire.

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# INDUSTRIAL OPPORTUNITIES

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CID

## AGRO AND FOOD INDUSTRIES

### WELL-DOCUMENTED PROPOSALS MOVE FORWARD QUICKLY

CID is expecting good results from a meeting it convened in Brussels on 5-6 June, to promote joint ventures in 17 ACP countries in East and Southern Africa and the Indian Ocean.

The indications are that those industrial project proposals which moved forward quickly were usually well substantiated and thoroughly documented. One ingredient in the success of the meeting was that the ACP promoters who attended were serious businessmen holding senior positions and able and willing to take decisions.

Before the close of the two-day meeting 9 letters of intent had been signed between ACP promoters and potential EEC joint venture partners. Since then, steps have been taken to carry out feasibility studies for several proposals. Among the studies to be undertaken are those for a poultry unit, a fishmeal plant, honey production, pork processing, a dairy, production of nicotine sulphate (from tobacco waste), a mineral water plant and a fruit juice factory. These studies will be carried out in Kenya, Madagascar, Malawi, Swaziland, Uganda, Zambia and Zimbabwe.

The meeting was a busy affair bringing together 26 ACP promoters and 94 EEC companies. Between them they managed to hold 230 private sessions to discuss 46 project proposals. Afterwards CID financed visits by ACP promoters to 38 factories to enable them to continue discussions and examine equipment.

Eight European financial institutions attended the meeting as observers, thus indicating their constant interest in seeking out sound projects.

#### FOOD PRIORITY

In a keynote address at the opening session, Mr. S. J. Kazunga, Zambian Ambassador to the EEC, remarked that "the theme of the meet-

ing with its emphasis on agro and food projects, could hardly have been better chosen".

He explained that the ACP group had placed "a very high priority" on food self-sufficiency and food security, as the basis for sustained self-reliant economic development.

"Cooperation with the EEC", he continued, "constitutes one very important instrument for the realisation of this priority goal".

Ambassador Kazunga said that the countries of East and Southern Africa "constitute, notwithstanding the modest per capita income, a very large potential market for various industrial and consumer goods".

He emphasised the importance of intra-African cooperation to facilitate the creation of larger markets, thereby inducing investment. In this context he pointed to the need for efficient intra-regional systems for making international payments.

The Ambassador also drew attention to existing preferential trade areas which can stimulate production and trade and which, through specific provisions for encouraging industrial development, can act as a powerful attraction to private foreign investors.

"Much of the increased investment, it is hoped, would be in the food industry sector. For investment in this sector will enable individual

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countries, not only to utilise more of their own indigenous local resources thereby resulting in net reduction of the region's imports from the outside world, but also to feed more adequately their rural populations".

"Industrial development in the region is not only desirable" he continued, "it is also mutually profitable for both North and South, requiring as it would the imports of machinery and other equipment from the North, particularly the EEC".

#### INVESTMENT INCENTIVES

The Ambassador recognised that this industrial process will require "considerable mobilisation" of domestic and foreign capital.

"The countries of the region", he went on, "are aware of this necessity and to this end have adopted investment codes with varying incentive measures. All these measures need to be made known to our EEC partners or to other suppliers of investment resources so that suppliers of funds are fully aware of the terms and conditions on which they can participate in our industries".

*Continued on page 2*

Continued from page 1

In a reference to one issue in the current ACP-EEC negotiations for the next Lomé convention, the Ambassador said "it is to be hoped that the Community and its Member States, in the context of our unique preferential arrangement, would give consideration to extending some concessions to their investors who wish to invest in our economies".

"In this way", he continued, "not only our Governments and the Community private suppliers of funds, but the EEC Member States' Governments as well, would be assisting in our industrial process".

### POTENTIAL OF AGRICULTURE

Another speaker at the opening session was Mr. John Leech, Head of External Relations at the Commonwealth Development Corporation (CDC).

He began by saying that although agriculture is the life-blood of nations it is subject to "severe interruptions caused by nature and the elements—but also to astonishing neglect".

He said that we too often give the farmer "a hoe with one hand but withhold a market, or a fair price, for his crop with the other—we demand his production but do not know what to do with it when he delivers".

"Much credit must go to CID" he continued, "for seeing the potential of agriculture as a resource base for industrial development".

"CDC is the oldest of the development financing corporations set up by Britain, Belgium, Denmark, France, Germany and the Netherlands which co-operate in joint project financing within the Interact Group. However, CDC is one of the relatively few institutions which throughout its 36-year history has devoted the largest single part of its investment to agriculture, often in association with the private sector".

Mr. Leech gave several examples of CDC's approach to agricultural investments indicating that successful projects require diversity, remunerative prices, adequate size and good management.

He concluded on an optimistic note: "Intending investors can take heart from the fact that the return on CDC's equity investments (including many which are not yet mature) last year exceeded 11%".

## FINANCIAL ANALYSIS SIMPLIFIED

# COMPUTER PROGRAMME AVAILABLE TO ACP FINANCIAL INSTITUTIONS

**A computer programme which performs rapid financial analyses of industrial projects is now available to ACP financial institutions for use, free of charge, on their own computers. Where necessary, CID may consider providing some assistance to help local staff to get the programme running successfully.**

Financial institutions in four ACP countries—Kenya, Madagascar, Western Samoa and Zimbabwe—have already indicated interest in having this programme. CID recommends that any ACP financial institution thinking of purchasing a computer for this purpose, should contact CID beforehand for advice about the most suitable equipment.

### EASY TO FOLLOW

CID first developed the programme in 1977 for use, under a time-sharing arrangement, on a mainframe computer. Since then it has been continuously refined; and with today's rapid developments in computer technology it was possible to re-write the programme for use on micro computers. (Indeed, CID has just begun to use the programme on its own recently acquired micro computer).

The programme takes approximately half an hour of operator and machine time on a mainframe, and one hour on a micro computer. CID estimates that the calculations involved would absorb two man-weeks if carried-out manually—and even then the balance sheet may not balance!

The programme is useful when carrying out the financial analyses required for feasibility studies of industrial projects. In CID's experience, the calculations and data provided in the programme's print-outs are totally acceptable to banks and other project financiers. The information is presented in a very simple manner. It is easy to understand and to follow and a deliberate effort was made to maintain this feature.

### USEFUL PRINT-OUTS

From inputs of basic data such as sales figures, tax rates, investment expenses like the cost of equipment, buildings and land, plus operating costs including salaries, raw materials and energy, the programme can present the following information in

tabular form via computer print-out.

1. The total investment and loan finance required, showing the breakdown between local and foreign funds.
2. Production and sales forecasts over a 10 year period showing the build-up in stocks of finished goods and the growth in the utilization of capacity.
3. Operating expenditure over 10 years, broken down under "fixed" and "variable" headings.
4. Financial charges and repayments (for up to six concurrent loans).
5. Depreciation schedule.
6. Working capital requirements.
7. Profit and loss accounts for 10 years including figures for return on equity and dividends.
8. Cash flow projections.
9. Balance sheet with three financial ratios appended: the debt: equity ratio, security coverage and the liquidity ratio.
10. Several different sensitivity analyses. Some of these show the sensitivity of net profit to increased borrowing, to fluctuations in sales or to operating costs or working capital.
11. Discounted cash flow and internal rate of return over a 10 year period.
12. A listing of the foreign exchange earned by the project, which provides some idea of the impact of the project on the host country's balance of payments.
13. A summary of the various tax benefits accruing to the host country over a 10 year period.
14. A measure of the development contribution of the project, showing the net value added (locally).
15. A break-even graph.

ACP financial institutions interested in transferring this financial analysis programme to their own computers are invited to make a written request to CID.



## ADAPTED TECHNOLOGY

## BLOCKS MADE FROM LOCAL SOIL FOR USE IN LOW-COST HOUSING

A European firm which has specialized in construction materials for more than 20 years has developed a technique for manufacturing blocks made from stabilized earth. This technique offers certain advantages for the construction of low-cost housing in ACP countries.

The machinery involved can be easily transported from one worksite to another and does not require any permanent installations. It can be operated by a team of 3 semi-skilled workers and a foreman.

The blocks can be used for:

- bearing walls (15, 30 and 45 cm)
- partitions and interior walls (10 and 15 cm)
- enclosure walls (15 cm)
- paving (6 cm).

## PROJECT MEETING IN SCOTLAND

CID is planning to hold an industrial project promotion meeting in Glasgow, Scotland, on Thursday 27 September. It will present a number of projects from ACP countries for which financial or technical partners are being sought. Invitations will be extended to ACP businessmen to participate in the meeting and to amplify their project proposals in detail.

Scottish companies are also being encouraged to submit their own project proposals for joint ventures in developing countries, and CID may be able to assist them by promoting their proposals and by providing financial and practical help for studies and implementation.

CID staff will be at the Glasgow meeting to assist with project discussions and to describe the range of incentives available.

The meeting will be conducted under the auspices of the Glasgow Chamber of Commerce, at the Scottish Development Agency's Conference Centre, 120 Bothwell Street, Glasgow. Further particulars may be obtained from CID, Brussels. ■

The blocks will withstand handling as they come off the machine and their good consistency enables them to be used immediately—which in any case is preferable as the mortar then sets better.

The blocks are generally laid with rough mortar. Their regular dimensions also allow various masonry adhesives to be used, such as cement, vinyl adhesives etc.

## THE RAW MATERIAL

The raw material can be any laterite, alluvial or colluvial soil, or in general any surface or subsurface soil (except for the humus layer) which meets the following conditions:

- grain size: 15 mm
- clay content: 10% to 30%
- water content: 6% to 10%

Laterite is ideal as a raw material, since it generally meets all these conditions.

Cement or lime is used as a stabilizer in an average proportion of 3% (4.5% maximum), or 6% for flooring.

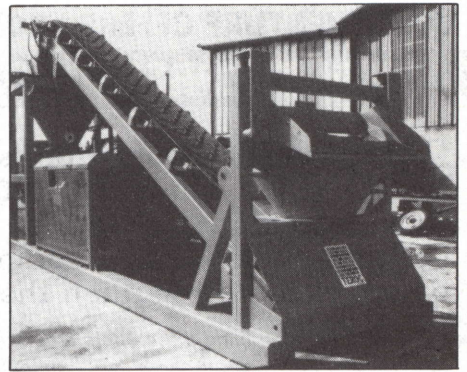
Clay or dolomite spar is good enough as a stabilizer for internal walls and partitions, in proportions of 15% to 30% for clay and 10% to 20% for dolomite.

The earth is screened, mixed with the stabilizer and then transferred into the moulds, where the blocks are compressed under 200 kg/cm<sup>2</sup>. The finished products are unloaded onto pallets by hand.

## THE MACHINERY

The production unit is based on an independent mechanism mounted on a chassis and consisting of a vibrating screen, a feed conveyor, an 80t press, a set of moulds and a hydraulic system powered by a 35 hp diesel motor.

The basic module has a production capacity of 300 blocks/hour, or 2 400 blocks/day working in shifts. At 33 blocks/m<sup>2</sup> this represents



*The production unit for making hyper-compressed stabilized earth blocks.*

about 70 m<sup>2</sup> of wall, or 100 m<sup>2</sup> of flooring, with 29 × 14 × 6 cm blocks.

The required investment includes the cost of the machine (approximately US\$ 75 000, FOB Europe) to which must be added the costs for delivery, light installations (storage sheds), soil excavation equipment and transportation equipment.

## THE PRODUCT

The blocks have the following features

- dimensions:
  - length = 29 cm,
  - width = 14 cm,
  - height = 9 cm.
- (The height can be varied between 6 and 14 cm).
- weight: 8 kg
- density: 2.2 kg/dm<sup>3</sup>
- dimensional tolerance: ± 1 mm
- compression strength (average)
  - on emerging from the machine: 50 to 80 kg/cm<sup>2</sup>
  - when stabilized: 130 to 180 kg/cm<sup>2</sup>
  - after immersion: 50 to 60 kg/cm<sup>2</sup>.

The European firm which manufactures the machinery will perform production tests on samples of earth (50 to 100 kg). It will also carry out installation studies and transfer technical know-how.

*And furthermore...*

*ACP sponsors are invited to contact CID for further details of any technology outlined in this section. CID can provide assistance towards implementation.*

*EEC industrialists who have developed adapted technologies can benefit from CID's services for the circulation of their technologies in ACP countries.* ■

## JOINT VENTURE OFFERS FROM EEC FIRMS

## ACP ENTREPRENEURS, PLEASE REPLY



ACP entrepreneurs interested in any of these offers are invited to write to CID quoting the reference number(s). CID will not be in a position to act upon letters received, unless ACP entrepreneurs answer all the questions listed in the box below. It would also be useful to enclose any complementary information, including the latest balance sheet, which would strengthen the attraction of an ACP entrepreneur as a potential partner.

*Organisations reprinting these offers are asked to ALWAYS include the CID reference numbers plus the relevant questions and conditions.*

### QUESTIONS FOR ACP ENTREPRENEURS

An ACP entrepreneur replying to an offer from an EEC firm must answer each question listed here.

- What are your present activities and your industrial and/or commercial experience?
- What would justify the implementation of a new venture to manufacture the product in question, what are the figures for current local consumption and production, and which raw materials or components are available locally?
- Are you aware that equity contributions normally come to at least one third of the total initial investment, including working capital?
- How much could you contribute to equity?
- In the event of a joint venture, what portion of the equity would be available to your EEC partner?
- What are the contributions, apart from equity, which you would require from an EEC partner?
- What would be the prospects of obtaining a local loan for the production and what would be the source of that loan?
- If there is need for a foreign loan or supplier's credit, what would be the chances of obtaining the required local guarantee?
- Would the production have the support of your government?
- Would formal government approval be required before one could set up production?
- What are the incentives which your country affords to foreign investors?

### Transportation equipment for use on or off road UK offer — Ref. 84/14a

A UK company wishes to get in touch with ACP countries with substantial requirements for heavy transportation equipment.

The products in question include heavy duty trailers, bulk carrier tankers, or tanks and containers.

The equipment cost would allow for vehicle maintenance and conversion and would amount to around US\$ 2.1 m.

The UK company can consider a joint venture and sees such production as a valuable import substitution activity. It already has established markets in Ghana and Nigeria.

### Juices from local fruit German offer — Ref. 84/15a

A German firm is prepared to enter into a joint venture arrangement to produce fruit juices, in flexible packs, from compounds and essences, or from local fruits.

A minimum investment in plant of around US\$ 487 000 would provide a capacity of approximately 20 million packs (20 cl.) a year.

### Fruit and vegetable processing ventures German offer — Ref. 84/16a

A manufacturer of fruit and vegetable processing equipment is interested in entering into joint ventures with ACP companies to produce frozen and/or canned fruits and vegetables.

A viable plant would require production lines with a capacity of 1.5 tons per hour and investment of about US\$ 1.13 million.

### The manufacture of welding electrodes German offer — Ref. 84/17a

A German company is searching for joint venture partners in ACP countries to manufacture welding electrodes.

Minimum capacity would be about 100 tons a month for an investment of about US\$ 2.62 million.

### Plants for manufacturing pressure-welded gratings German offer — Ref. 84/18a

A company specialised in the manufacture of pressure-welded gratings is interested in considering joint venture production with an ACP company already involved in the metal-working industry.

The plant can be set up in stages to reach full integration with a capacity of 100 000 m<sup>2</sup> of pressure-welded grating in one shift.

Investment costs would come to about US\$ 5.6 million including working capital.

### Setting up hot dip galvanisation plants Belgian offer — Ref. 84/19a

A group of two companies (an industrial galvaniser and an engineering firm) specialises in the setting-up of hot dip galvanising units and is interested in transferring its know-how to ACP countries.

The group can offer studies, whole or partial setting-up, training and management. It can also consider involvement in joint ventures.

The average economical capacity is between 10 to 15 treated tons a year. The investment needed is about US\$ 3 million.

### **Workshops for making spare parts for engines** Belgian offer — Ref. 84/20a

A manufacturer with many years of experience in the metal-working and engineering sector is interested in setting up workshops, via joint ventures, to produce spare parts for use in vehicles, engines and industrial maintenance.

The Belgian company can provide know-how, equipment and training.

The basic cost of equipment would be about US\$ 250 000.

### **Workshop for fabricating steel parts for industry** Irish offer — Ref. 84/21a

A leading Irish engineering firm manufactures heat exchangers, pressure vessels, silos, prefabricated pipework, plus plate and steelwork for furnaces, mining, petrochemical and cement works.

It wishes to develop the production of similar products, on a joint venture basis, in ACP countries.

Minimum equipment cost would be about US\$ 686 000 for new plant and US\$ 292 000 for second hand plant.

The company can assist with management, technical assistance, export marketing, installation and supply of equipment.

### **Mobile plants for processing sand/gravel** Irish offer — Ref. 84/22a

An Irish company is interested in setting up an assembly unit on a joint venture basis to produce portable and mechanically simple sand/gravel processing plants.

The minimum scale of production would be one unit per week; and the basic cost of equipment would be about US\$ 146 000 for new plant or US\$ 58 400 for second hand plant.

The Irish company can supply and install equipment. It can also provide management and technical assistance.

### **Manufacturing a variety of dairy products** Irish offer — Ref. 84/23a

A parastatal dairying company wishes to set up joint venture operations in ACP countries for the manufacture of various dairy products by recombining bulk raw materials such as butter, sugar and skim milk powder.

The products include milk, yoghurt, cheese and ice cream.

The process incorporates a UHT treatment which gives products a long-life quality, making refrigeration unnecessary.

The minimum scale of production would be 20 000 litres a day. The minimum investment in plant would be US\$ 5 to US\$ 10 million.

The plant would require an adequate source of electricity and water of acceptable quality.

The Irish company can provide management and technical assistance. It can also help with export marketing.

### **Manufacture/assembly of economic "system housing"**

Anglo-Jamaican offer  
Ref. 84/24a

A Jamaican Company with offices in London, wishes to contact ACP entrepreneurs with a view to setting up a factory to manufacture and assemble system housing.

The system incorporates lightweight steel sections to be completed with concrete at the building site. It is patented worldwide and produces very competitive permanent buildings for domestic or commercial use.

Total investment required: US\$ 750 000 to US\$ 1 000 000. Payback period with under 50% utilization of the factory is 16 months (say 1 000 houses representing approximately 1 600 tons of fabrication).

The company is willing to consider joint ventures, or manufacturing under licence.

### **CALL TO EEC INDUSTRIALISTS**

**Use your production know-how to expand via an ACP country.**

**Let CID promote your production proposals.**

CID encourages EEC firms to come forward with proposals for setting up production in any of 64 African, Caribbean and Pacific (ACP) countries. A proposal should be based on appropriate technology and may involve the relocation of part of a company's existing plant to an ACP country.

CID can promote suitable proposals from EEC companies, free of charge, through its many lines of communication to the ACP business world. This can have the following advantages for EEC companies:

- Entry to new markets, which may otherwise be closed to them.
- Access to local sources of raw materials.
- Relocation of labour-intensive operations and/or existing plant to an ACP country.
- Access to additional finance plus fiscal and other incentives, through an ACP partner.

The investment required of EEC firms in such joint ventures can be low in relation to the overall financial input. An EEC firm may also include good second hand equipment as a contribution to the overall investment.

EEC companies who want CID to promote their proposals should, ideally, be small or medium-sized. They should be in good financial standing and/or have good existing plant for relocation, as an investment, to an ACP country. They should also be willing to take a minor share of the equity, in a joint venture with an ACP partner.

Joint ventures with ACP partners may be particularly worthwhile for EEC industries which need to restructure to cope with high labour costs, or that require sub-assemblies or semi-finished products from ACP countries.

**REQUEST A PRODUCTION PROPOSAL FORM FROM CID NOW**

## EUROPEAN PROMOTION MEETING

## IRISH INDUSTRY WILLING TO INVEST IN ACP COUNTRIES

— BUT LACKS STATE SUPPORT



A prominent issue discussed during a promotion meeting held in Dublin on 29 June was the lack of incentives for Irish companies interested in industrial cooperation with developing countries.

Following the meeting, five Irish companies nonetheless immediately registered their willingness to invest in joint venture productions in ACP countries, while several others expressed keen interest.

The Dublin meeting was attended by industrialists from 30 Irish companies and by representatives of government departments and institutions. It was organised by CID in conjunction with the confederation of Irish Industry (CII) and with the

*A view of the attendance at the promotion meeting in Dublin.*

## OFFERS FROM ACP SPONSORS

## EEC INDUSTRIAL PARTNERS WANTED



EEC industries are invited to contact CID, quoting the reference number, in response to any offer outlined in this section. CID will answer questions on any item and will indicate the kind of assistance it can provide. EEC industries should give a brief description of their operations; and, in relation to the project which interests them, they should state the kind of involvement they envisage.

*Organisations reprinting these offers in their own publications, are asked to ALWAYS include CID reference numbers.*

### Making tiles from local raw materials

Togo — Ref. 610.TOG.2.EXT.

Togo possesses large reserves of the raw materials required for ceramics and the Togolese national investment corporation/Société Nationale d'Investissements (SNI), will back the establishment of a plant to manufacture ceramic tiles.

It seeks an EEC joint venture partner who will provide the required technology and know-how and who will take a share of the equity.

The plant would be established in the industrial zone in the Lomé port area and would have the following annual capacity:

Non-enamelled mosaic tiles	
2 × 2 cm	75 000 m <sup>2</sup>
5 × 5 cm	75 000 m <sup>2</sup>

Non-enamelled clay tiles	
10 × 10 cm	50 000 m <sup>2</sup>
10 × 20 cm	50 000 m <sup>2</sup>

Enamelled clay tiles	
10 × 10 cm	50 000 m <sup>2</sup>
10 × 20 cm	50 000 m <sup>2</sup>
Total	350 000 m <sup>2</sup>

### Timber company wishes to expand and diversify Ghana — Ref. 610.GHA.8.TIM.

An existing company employing 270 people owns three forestry exploitation concessions and already produces veneers and lumbers.

It now wishes to increase production to reach the potential capacity of the existing plant i.e. 400 000 m<sup>2</sup> of veneers and 660 m<sup>3</sup> of lumbers, per month. It also wishes to diversify its operations to produce exportable

items.

The company wants an EEC partner to provide market outlets and technical assistance; and who will, possibly, take a share of the equity.

### Plant for processing local fruits

Togo — Ref. 610.TOG.20.F00.

The Togolese national investment corporation/Société Nationale d'Investissements (SNI), wishes to establish a multi-purpose plant to produce fruit juice, jams and tomato concentrate. It seeks an EEC joint venture partner who will provide know-how and take a share of the equity.

Nominal capacity at start-up would be 500 kg of fruit an hour.

The locally available fruits are citrus, mango, pineapple and tomato. ■

collaboration of the Industrial Development Authority (IDA) and the Irish Export Board (CTT). Morgan Sheehy, Irish member of CID's Advisory Council, took the chair.

The meeting was opened by Liam Conellan, Director General of the Confederation of Irish Industry, who said that since 1976 Irish firms have been involved in providing technical assistance to development projects in ACP countries under the Lomé Convention and that it was a logical step to extend this to industrial cooperation, particularly in small scale industries in selected countries.

Dr. Isaac Akinrele, Deputy Director of CID, suggested that Ireland might

## ACP-IRISH PROJECT DISCUSSIONS

### • Swaziland

Mr. V. Khathwane, General Manager of the National Industrial Development Corporation of Swaziland (NIDCS), attended the Dublin promotion meeting and afterwards remained in Ireland for joint venture negotiations.

His organisation is interested in participating in a CID-assisted vegetable dehydration plant in Swaziland.

### • Sudan

Mr. H. Karim, Managing Director Seletat Quarry Co. Ltd, Sudan, was present at the Dublin promotion meeting and has two CID-assisted projects with Irish companies.

One project concerns the expansion and diversification of an existing quarry and the other entails the production of wooden doors and windows. The feasibility study for the latter project was earlier completed by GBWA, an Irish consulting firm, and CID financed a significant part of the costs.

### • Pacific

The CID team was accompanied in Dublin by two industrial promotion attachés from the Pacific—Mr. Rupe-ni Tuiloma (Economic Development Board of Fiji) and Mr. Falefa Lima (Western Samoa Development Bank). They spent an afternoon session discussing Pacific projects with several Irish industrialists who had expressed an interest in joint ventures. ■

be handicapped in taking up ACP industrial opportunities due to the fact that the Irish have neither a development finance institution of their own, nor an investment insurance scheme.

He added that: "the dexterity and organisational acumen of the Irish missionaries would appear to have lost out to industrialists in other European countries who have taken advantage of the modern change in the theme of development cooperation from moral and religious ethics to the exploitation of material resources for economic well being".

## FINANCE FROM IRISH BANKS

Mr. Denis Murphy, a senior lending manager of Allied Irish Banks (AIB), spoke about his bank's services to Irish customers, saying that these would include a range of back-up facilities to companies setting up joint ventures overseas.

In a subsequent meeting two senior managers of another major Irish bank—the Bank of Ireland—told the CID delegation that their bank would finance joint ventures in developing countries if the Irish client was creditworthy. They would, however, stop short of taking equity themselves.

Nevertheless, it was the general opinion of the Irish industrialists that the facilities offered by the commercial banks are insufficient and that Ireland would need to provide Government support similar to that available in other EEC States. The support required may include soft loans, equity, technical assistance funds, investment insurance; and the extension of the export credit scheme to cover soft credit, guarantees and non-Irish made or second hand plant.

## STUDY GROUP PROPOSED

In meetings with the Irish Department of Foreign Affairs, the Industrial Development Authority (IDA), the Irish Export Board (CTT) and the Industrial Credit Company (ICC), the CID delegation detected general support for an IDA proposal to establish a study group to examine the kind of infrastructure which Ireland may need to encourage Irish firms to set up joint ventures in developing countries. The Development Cooperation Division of the IDA will coordinate this study group and transmit its recommendations to the policy-makers.

A meeting with the Industrial Credit Company (ICC) was particularly encouraging as Mr. F. A. Casey, ICC's Managing Director, said that ICC would be willing to lend money to an Irish client company for the totality of operations (including equity) in a viable ACP project. He also said that ICC would be interested in identifying suitable partners among its own customers, for CID-assisted ACP industrial projects.

## IRISH EXPERIENCE

The promotion meeting was also addressed by Tony Gleeson of GBWA and by Bill Maxwell of Irish robes, who explained their companies' experience of ACP industrial projects.

This meeting was followed by in-depth discussions with Irish companies on specific projects, including some potential ACP-Irish joint ventures. ■

## FINANCIAL INSTITUTION'S VIEWS

During the Dublin promotion meeting Mr. Maarten Van Der Schaft, Assistant General Manager of the Netherlands Finance Company for Developing Countries (FMO), described his organisation for the benefit of Irish industrialists, as an example of an EEC development finance institution<sup>(1)</sup>.

He also outlined some of the advantages to European industry of investing in developing countries<sup>(2)</sup>:

- markets are protected by high import duties and in order to capture these markets one has to go in there and manufacture;

- manufacturing in a developing country can open entirely new markets—for example, to establish an industry in Western Samoa could open up markets in Australia and New Zealand;

- a European company can recover some of its costs by increasing its volume of production via a joint venture in a ACP country.

"A good sponsor", added Mr. Van Der Schaft, "is even more important than a sound project".

(1) A booklet describing joint ventures and EEC and ACP development finance institutions is available from CID.

(2) Refer to the booklet mentioned in note (1) for more details of the advantages of ACP-EEC joint ventures. ■

## ALTERNATIVE ENERGY

# BIOGAS POPULARISED IN JAMAICA

A CID grant has enabled the Scientific Research Council of Jamaica (SRC) to implement a biogas unit which produces gas from animal and vegetable waste. This unit has become the main demonstration centre for the dissemination of the technology throughout Jamaica, in an effort to upgrade the living standards of low-income farmers.

When the project was initiated in 1979 Jamaica was quite inexperienced in biogas technology, but according to SRC's 1984 project report, it is now considered to be the leader in this field in the English-speaking Caribbean. The CID-assisted unit was the first to be built by SRC, whose interest in biogas was triggered by the need to develop alternative sources of energy following the massive increases in oil prices in the 1970's.

The unit is located in a public health institution (The Mona Rehabilitation Centre) and is fed by droppings from 3 200 laying hens and a litter of 200 rabbits. It produces 30-40 m<sup>3</sup> of gas per day which is used to run:

- 4 household stoves—to serve the doctor's quarters (4 people) maintenance workers (3-4 people) and a dining room (for about 40 people) attached to the Children's Ward.

- a 4hp pump needed to bring effluent from the digester to an irrigation well whence it is distributed to fertilize pastures and crops.

It is also planned to use the effluent to promote the growth of algae to be used as fishfood for the Mona fishponds and as an animal feed supplement. The heavy solid residue obtained upon cleaning the digester is dried and added to the farmland as a conditioner.

SRC has bought a 6kW generator for the unit and should soon be able to use biogas to generate electricity.

### FURTHER DEVELOPMENTS

From these beginnings another 14 biogas units have been built in Jamaica and 18 more are to follow. SRC is now actively engaged in popularising the technology particularly to help farmers in a programme financed by the Jamaican Ministry of Mining and Energy.

SRC has discovered that biogas becomes economically attractive only when its use is diversified i.e. when it is used for lighting, cooking,

running an engine and a refrigerator, for medium to large scale operations. The biogas units should be large enough to cover these uses. In view of this and the costs involved, SRC now favours a Costa Rican plastic bag technology over the Chinese-type digester installed for the original Mona project.

In Jamaica, the generation of biogas is at present done exclusively from animal waste. To further popularize the technology, SRC has introduced a research programme aimed at diversification into the use of vegetable waste from crops such as bananas, peas, sugarcane and coffee. This is because many people in rural areas do not keep enough animals to run a suitably sized digester from animal waste alone, yet they are wholly dependent on coal, kerosene, oil and wood, for cooking or lighting.

In another development, SRC has begun to work with a local rum manufacturer to produce biogas from industrial waste.

### CID ASSISTANCE

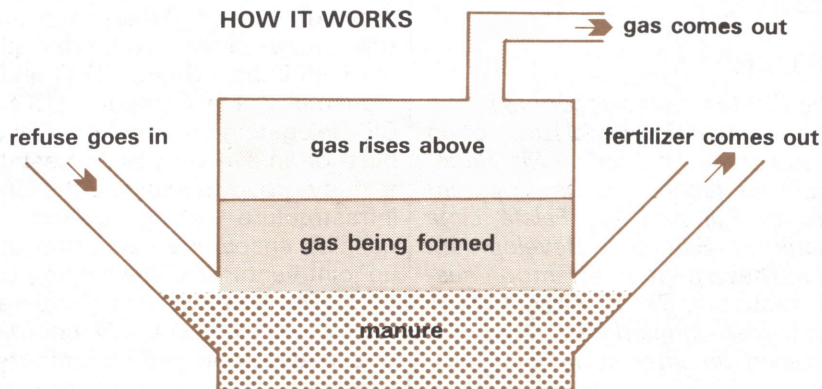
CID assisted the project under its activities aimed at promoting the development and implementation of adapted technologies. The assistance was intended to enable SRC to demonstrate the technical and economic feasibility of the production and application of biogas from animal and vegetable waste; to show that effluent and residue can be used as fertilizer; and to develop a model for the implementation of other plants in Jamaica.

The grant provided by CID amounted to US\$ 10 440. A further US\$ 8 400 was provided by the Jamaican Ministry of Mining and Energy. ■

### ILLUSTRATION BASED ON SRC'S PROMOTIONAL LITERATURE FOR BIOGAS

#### NOW YOU CAN MAKE YOUR OWN COOKING GAS

Farmer, now you can make gas for cooking, lighting, and powering small farm machines by using animal waste such as pig, cattle and chicken dung, and vegetable matter. When the waste rots, it gives off a gas called biogas.



# OPERATIONAL SUMMARY

No. 24 — September 1984

(position as at 20 August 1984)



## EEC-financed development schemes

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:

Mr. Franco Cupini  
Directorate General for Development  
Commission of the European Communities  
(ARCH.25/1-1)  
200, Rue de la Loi  
B-1049 Brussels

who will pass on requests for information to the services in charge of projects.

# Sectoral Index

<p style="text-align: center;"><b>AGRICULTURE</b></p> <p>Irrigation and soil development, infra-structures, improvement</p> <p>Coffee, tea, tobacco, cereals, earth-nut, ground-nut, maize, sugar, coton, palm-tree, coco-tree, rice, gum-tree, potatoes, citrus fruit, hevea</p> <p>Seed and crop protection, environment</p> <p>Agro-industry</p> <p>Forestry</p>	<p>Burundi, Cameroon, Cape Verde, Central African Rep., Comoros, Chad, Dominica, Ghana, Guinea, Equatorial Guinea, Kenya, Malawi, Mauritius, Niger, Rwanda, Senegal, Sierra Leone, Somalia, St.-Lucia, Sudan, Swaziland, Chad, Burkina-Faso, Zambia, Zimbabwe, Egypt, Bangladesh, Burma, Indonesia, Nepal, The Philippines, Dominican Republic, Haiti, Nicaragua, Honduras, Bolivia, Costa Rica, India, Peru, Yemen, Sri-Lanka</p> <p>Burundi, Cameroon, Comoros, Djibouti, Ethiopia, Ghana, Guinea, Ivory Coast, Jamaica, Liberia, Madagascar, P.N.G., Solomon Islands, Senegal, Sierra Leone, Somalia, Suriname, Tanzania, Zimbabwe, CILSS, Bangladesh, Burma, Thailand</p> <p>Bahamas, Benin, Burundi, Mauritius, Rwanda, Tuvalu, Tanzania, Zambia, Niger Basin Authority, CILSS, Saharian periphery, Egypt, Mozambique, Bangladesh, Bhutan, India, China (People's Rep.)</p> <p>Burundi, Grenada, Guinea, Liberia, Rwanda, Solomon Islands, Togo, Morocco, Thailand, Yemen (Arab Rep.)</p> <p>Gabon, Guinea Bissau, Fiji, Nigeria, Somalia, Tanzania, New Caledonia, Niger Basin Authority, French Polynesia, Mali, Burkina-Faso and Niger, Nepal, Kenya</p>
<p style="text-align: center;"><b>STOCK FARMING-FISHING-PISCICULTURE</b></p> <p>Improvement</p> <p>Veterinary actions</p> <p>Processing industry</p>	<p>Antigua and Barbuda, Benin, Botswana, Burundi, Cameroon, Ethiopia, Ghana, Jamaica, P.N.G., St. Lucia, St. Vincent and Grenadines, Senegal, Sierra Leone, Togo, Uganda, Burkina-Faso, Vanuatu, Zaire, Congo, Sao Tome &amp; Principe, Equatorial Guinea, CARICOM, Tunisia, Angola</p> <p>Kenya, Lesotho, Senegal, Zambia, Southern Africa, Kenya-Gambia-Senegal, Suriname, 28 African Countries, Eastern Africa, ICIPE, Tanzania and SADCC</p> <p>Mali, Tonga, Neth. Antilles, French Polynesia, Indonesia, India</p>
<p style="text-align: center;"><b>RURAL HYDRAULICS</b></p> <p>Wells, bores, pumps, pipes, small dams</p>	<p>Botswana, Guinea, Guinea Bissau, Guyana, Mauritania, Liberia, Senegal, Sierra Leone, Swaziland, Togo, Burkina-Faso, Zimbabwe, Montserrat, Mayotte, Egypt, Nepal, Burma, Pakistan, Laos, Haiti</p>
<p style="text-align: center;"><b>TOWN WATER SUPPLY AND SEWERAGE</b></p> <p>Water supply, pipes, drinking water</p> <p>Sewerage, waste water, collectors, pumping stations, treatment</p>	<p>Cape Verde, Comoros, Rwanda, St. Christopher &amp; Nevis, Tanzania, Uganda, Zimbabwe, Lebanon</p> <p>Cape Verde, Senegal</p>
<p style="text-align: center;"><b>SOCIAL CONSTRUCTIONS</b></p> <p>Houses, schools, hospitals, buildings, laboratories</p>	<p>Belize, Benin, Burundi, Cape Verde, Central African Rep., Chad, Congo, Djibouti, Ethiopia, Fiji, Gambia, Grenada, Guinea, Guinea Bissau, Jamaica, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Niger, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Suriname, Swaziland, Tanzania, Uganda, Burkina-Faso, Zimbabwe, CEAO, CERFER, Maritime Transport Conference, OCAM, LIDEAC, Forum Fisheries Agency, MRU, Eastern Africa, CARICOM, Egypt, Jordan, Morocco, Syria, Yemen, Asean, Bolivia</p>
<p style="text-align: center;"><b>TRANSPORTS AND COMMUNICATIONS</b></p> <p>Roads, bridges, airports, railways, ports</p>	<p>Antigua and Barbuda, Benin, Burundi, Cameroon, Cape Verde, Chad, Comoros, Grenada, Guinea, Guinea Bisseau, Uganda, Guyana, Lesotho, Liberia, Madagascar, Mauritania, Mauritius, Niger, P.N.G., Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Suriname, Swaziland, Tanzania, Tonga, Zaire, Anguilla, Neth. Antilles, Turks &amp; Caicos, Guyana-Surinam, Niger-Nigeria, Central African Rep., Senegal-Guinea, Djibouti-Ethiopia, Kenya, Uganda, Swaziland-Lesotho, CARICOM, Pakistan, Nicaragua-Honduras</p>
<p style="text-align: center;"><b>TELECOMMUNICATIONS</b></p> <p>Radio, telephone, satellites, hertzian</p>	<p>UAPT, Sierra Leone</p>
<p style="text-align: center;"><b>ENERGY</b></p> <p>Power stations, dams, electrification</p>	<p>Cape Verde, Gabon, Ethiopia, Kenya, Mali, Mauritania, P.N.G., St. Christopher &amp; Nevis, Somalia, Suriname, Tuvalu, Zaire, Zambia, O.M.V.G., Egypt</p>
<p style="text-align: center;"><b>NEW AND RENEWABLE ENERGY</b></p> <p>Solar, wind-wills, biomass, gas, geothermics</p>	<p>Guinea, Senegal, Suriname, Rwanda-Zaire, South-Pacific (SPEC), Pacific OCT</p>
<p style="text-align: center;"><b>MINING</b></p> <p>Soil survey, research, geophysical survey,</p> <p>Infrastructure, production, processing plants</p>	<p>Congo-Gabon</p> <p>Burkina-Faso, Ghana, Guyana</p>
<p style="text-align: center;"><b>MAPPING</b></p> <p>Soil-Air</p>	<p>Congo-Gabon, Rwanda</p>
<p style="text-align: center;"><b>INDUSTRY</b></p> <p>Plants, productions</p>	<p>Burundi, Malawi</p>
<p style="text-align: center;"><b>TRADE, INDUSTRY, TOURISM, INVESTMENTS PROMOTION - MANAGEMENT - MARKETING - S.M.E. TRAINING</b></p>	<p>Barbados, Burkina-Faso, Chad, Ghana, Gabon, Grenada, Guinea, Jamaica, Kenya, Liberia, Malawi, P.N.G., Rwanda, Senegal, Somalia, St. Lucia, St. Vincent and Grenadines, Sudan, Suriname, Trinidad and Tobago, Zaire, Zambia, Neth. Antilles, SADCC, CARICOM, AATPO, Indian Ocean ACP Countries, African ACP Countries, Algeria, Lebanon, Egypt, Indonesia, Thailand, ASEAN, Yemen, Andean Pact., China (People's Rep.)</p>



# ACP STATES

★ Denotes new projects

## ANTIGUA AND BARBUDA

**Livestock development — Phase I.** Resp. Auth.: Ministry of Agriculture. Estimated cost 2 mECU. Works, supplies and T.A. Project on appraisal. Date foreseen for financial decision 2nd half 84. 4th and 5th EDF.

**Road Reconstruction.** Resp. Auth.: Ministry of Public Works. Estimated cost 3 mECU. Study for identification of works on the way by GEOPROGETTI (I). Project stage: identification. 4th and 5th EDF.

## BAHAMAS

**Fruit crop nursery.** Resp. Auth.: Ministry of Agriculture. Estimated total cost 1.016 mECU. EDF 0.510 mECU local 0.506 mECU. Works, supplies and T.A. T.A.: Short-list already drawn up. Project in execution. 5th EDF.

## BARBADOS

**Tourism development.** Resp. Auth.: Barbados Board of Tourism — Barbados Hotel Association. 0.192 mECU. Production of a multilingual Travel Trade Manual and supply of equipment. Supplies: int. tender in 84. 5th EDF.

## BELIZE

**Belize College of Arts, Science and Technology (BELCAST).** Resp. Auth.: Ministry of Education. Estimated cost 7 mECU. Works and supplies. T.A. for tender dossier and plans: short-list not yet drawn up. Project on appraisal. 4th and 5th 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 renovation.** Resp. Auth.: Ministère des Travaux Publics. Reinstatement and asphaltting of 75 km of the road. Estimated total cost 55 mECU. Estimated EDF participation 18 mECU. Cofinanced by IBRD and possibly by CEDEAO, BOAD and FADES. Project on appraisal. 5th EDF.

**Upgrading of health service infrastructure in Porto Novo Hospital.** Resp. Auth.: Ministère de la Santé Publique. Estimated cost 10 mECU: renovation and construction of the hospital building and equipment. Project on appraisal. Works: Int. tender with prequalification, launched (conditional) in August 84. 4th and 5th 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 m<sup>2</sup> 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 2nd half 84. 4th EDF.

**Cotonou maternity hospital.** Resp. Auth.: Ministère de la Santé Publique. ±1 mECU. Works: Acc. tender. Equipments: int. tender in '84. T.A.: TECHNO-

SYNESIS (I). Date foreseen for financial decision: 2nd half '84. 4th EDF.

**Livestock development in the Borgou region.** Resp. Auth.: Ministère des Fermes d'Etat, de l'Élevage et de la Pêche. Numerical and stabilizing cattle improvement for meat production increase. 5.950 ECU. Date financial decision May 84. 5th EDF.

**National Parks development and environment protection.** Resp. Auth.: Ministère du Développement Rural. 3,525 mECU. T.A. and equipment for roads and T.A. for scientific actions and Fauna and Flora protection. T.A.: Restr. tender after prequalification. Prequalification done. 5th EDF.

## BOTSWANA

**Village water supplies.** Resp. Auth.: Ministry for Mineral Resources and Water Affairs. Planning Study: DECON-FLOTO (D). Project on appraisal. 5th EDF.

**Sheep and Goat development. phase II.** Resp. Auth.: Ministry of Agriculture. Animal Production Division and Animal Production Research Unit (APRU). Estimated total cost 2 mECU. EDF 1.6 mECU. Local 0.400 mECU. Works, supply of materials and equipment and T.A. Project in execution. T.A.: GITEC (D). 5th EDF.

## BURUNDI

**Institut Universitaire de Sciences de l'Éducation (IUSE).** Resp. Auth.: Ministère de l'Éducation Nationale — 0.7 mECU. Construction and equipment of educational buildings (general teaching classes, laboratories, workshops). Int. tender dossier: TETRA Consultants (Lux). Project on appraisal. 4th EDF.

**Livestock development project.** Resp. Auth.: Ministère de l'Agriculture. Estimated Cost: ±1 mECU. Supply of equipment and T.A. Study: SEDES Consultant (F). Project on appraisal. 4th EDF.

**Remera tea factory.** Resp. Auth.: Ministère du Plan. Tea factory building for 600-700 tons/year. Project stage: identification. 5th EDF.

**Bujumbura naval ship yard.** Resp. Auth.: Ministère des Transports. Study by I.P.G. (D). Project on appraisal. 4th and 5th EDF.

**Faculty of agronomy.** Technical and architectural study. BRUSA-PASQUE (I). Project on appraisal. 5th EDF.

**Food strategy—Priority measures.** Resp. Auth.: Government and Ministère de l'Agriculture. 1 mECU. Soil aptitude map in the Mosso region. Plant protection pilot operation and development of seed nurseries. Versant basins protection. Works by direct labour. Supplies by direct agreement. Date financial decision December '83. Special programme hunger.

**Bujumbura-Muzinda Road.** Resp. Auth.: Ministère des Travaux Publics, de l'Énergie et des Mines. 5.1 mECU. Reinstatement and asphaltting of the road (13,5 km). R.I.G. Bujumbura-Bubanza. Works: int. tender. Supervision of works: short-list already drawn up. Int. tender conditional upon provisional finance launched in February 84. Date financial decision July 84. 3rd and 4th EDF.

★ **Upgrading of the RN 1.** Resp. Auth.: Ministère des Travaux Publics. Estimated cost 2 mECU. Works and supervision. Int. tender foreseen in the 2nd quarter 85. Project on appraisal, 5th EDF.

★ **Improvement of the social and economical conditions in the Imbo-Centre in relation with the rural development of the East Mpanda.** Resp. Auth.: Ministère du Plan. Estimated cost 8.5 mECU. Health programme, sewage, feeder roads, buildings, works and supplies. Study by SFERES(F). Project on appraisal. Date foreseen for financial decision October 84. 5th EDF.

## CAMEROON

**Flood-farming development in Logone and Chari departments. Phase II.** Resp. Auth.: Ministère de l'Agriculture. (SEMRY) 8.970 mECU. Continuation and extension current operation. T.A.: Hydroplan (D) and SCET-AGRI (F). Date financial decision June 84. 5th EDF.

**Fishery development in the Lagdo basin.** Resp. Auth.: Mission d'Étude de la Vallée Supérieure de la Benoue. Stabex 81. Estimated total cost ±3 mECU. EDF 2 mECU, FAC, local and NGO ±1 mECU. Fisheries research, monitoring and T.A. T.A.: Restr. tender short-list drawn up. 5th EDF.

**Djuttitsa tea project.** Resp. Auth.: Ministère d'Etat chargé du Plan et de l'Aménagement du Territoire. CAMDEV (Cameroun Dev. Corp.). Estimated total cost 1.366 mECU. EDF Stabex 81. 0.712 mECU. Local 0.654 mECU. Completion of works and tea and eucalyptus plantation cultivation. Eucalyptus for fuel wood for tea factory. Project on appraisal. Date foreseen for financial decision September 84. 5th EDF.

★ **Yaoundé — Ayoa Road — Technical study.** Resp. Auth.: Ministère des Transports. Estimated cost 0.860 mECU. Technical study for the execution and preparation of the tender dossier. Restr. tender. short-list foreseen in the 4th quarter 85. 5th EDF.

## CAPE VERDE

**Sal international airport improvement.** Resp. Auth.: Ministère des Transports et Communications. Estimated total cost 14.56 mECU. EDF 6.21 mECU, Italy 3.66 mECU, local 4.69 mECU. EDF part: works, supply of VOR and NDB, luggage and security equipment, furnitures, cooking equipment and supervision of works. For Italy: telecommunications, DME, fire-extinguishers and handling. Int. tender for equipment launched on July 84. Project in execution. Date financial decision June 84. 5th EDF.

**Praia water supply and sewerage.** Resp. Auth.: Secretariat au Plan. Estimated cost 6.5 mECU EDF, Kuwait 3.5 mECU. Prequalification before restr. tender launched in August and October 83. Date foreseen for financial decision October 84. T.A.: W.P.W (D). 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 2nd half '84. 4th EDF.

**Soil protection and conservation.** Resp. Auth.: Ministère du Dév. Rural. 1.360 mECU. Total execution by direct labour. Date financial decision May 84. 5th EDF.

**Praia electrification.** Resp. Auth.: Secrétariat au Plan. Estimated cost 0.900 mECU. Project on appraisal. Date foreseen for financial decision, 2nd half 84. 5th EDF.

#### CENTRAL AFRICAN REPUBLIC

**Renovation and equipment of Lycée Technique de Bangui.** Resp. Auth.: Ministère de l'Education. 0.800 mECU. Supply of equipment and renovation works. Studies: O.R.T. (UK). Date foreseen for financial decision: 2nd half '84. 5th EDF.

**Rural development in the cotton area.** Resp. Auth.: Ministère de l'Agriculture (SO-CADA). Cofinanced project with I.D.A. and France. EDF 7 mECU. T.A.: W.P.W. (D). Int. tender for insecticides launched in May 84. Project in execution. 5th EDF.

**Paediatric complex in Bangui and Provinces.** Resp. Auth.: Ministère de la Santé. Estimated cost 2.420 mECU. Buildings and supply of equipment. Works: acc. tender launched. Supplies: int. tender. Date foreseen for financial decision 2nd half 84. 5th EDF.

#### CHAD

**Renovation of public buildings.** Resp. Auth.: Ministère des Travaux Publics. 1.250 mECU. Works, supply of equipment and T.A. Works: acc. tender and direct labour. Supplies and T.A.: direct agreement. Date financial decision April 84. 5th EDF.

**N'Djamena-Guelendeng-Sahr Road.** Resp. Auth.: Ministère des Travaux Publics. To repair the earth-road over 560 km. Int. tender (conditional) foreseen in September 84. Estimated cost 8.8 mECU. (EDF part 2.7 mECU). Date foreseen for financial decision October 84. 5th EDF.

★ **Priority actions programme in the educational field.** Resp. Auth.: Ministère du Plan et de la Reconstruction. Estimated cost 5.2 mECU, works, supplies, scholarships and T.A. Project on appraisal. Date foreseen for financial decision October 84. 5th EDF.

#### COMOROS

**Economical and technical study to assess harbour infrastructure in Grande Comore and in Mohéli.** Resp. Auth.: Ministère des Travaux Publics. Feasibility study: short-lists already drawn up. Project on appraisal. 5th EDF.

**Maize development project.** Resp. Auth.: Ministère de l'Agriculture. 2.34 mECU. Works, supplies and T.A. T.A.: Luxconsult (Lux). Project in execution. 5th EDF.

**Mutsamudu water supply.** Resp. Auth.: Ministère du Plan. 2.3 ECU. Works and supplies for drinking water supply to the town. Works and supplies: Int. tender conditional upon provisional finance launched in October 83. Work supervision: DOXIADIS (GR). Project in execution. 5th EDF.

**Improvement of the Jimilimé Region (Anjouan).** Resp. Auth.: Ministère de la Production et des Industries Agricoles. 1.482 mECU. Works, supplies and T.A. Feeder

roads, buildings, nurseries, vehicles, tools. T.A.: An agronomist. Date financial decision June 84. 5th EDF.

#### CONGO

**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

**Revitalization and improved use of the doum palm plantations.** Resp. Auth.: Ministère de l'Agriculture et du Dév. Rural. Estimated cost 0.750 mECU. 1st stage: study for preserving and making better use. After the study a pilot programme to improve project. Date financial decision December '83. Only for the study 0.200 mECU. Special programme hunger.

★ **Administrative training centre.** Construction of two buildings. Estimated cost 0.560 mECU. Cofinanced by EDF and France. Project on appraisal. 5th EDF.

#### DOMINICA

**Crop diversification project.** Resp. Auth.: Ministry of Agriculture. Estimated cost 0.547 m ECU. Continuation of essential oils programme. Works, supplies and T.A. Project on appraisal. Date foreseen for financial decision 2nd half 84. 5th EDF.

**Lime Rehabilitation Project.** Resp. Auth.: Ministry of Agriculture. 0.560 mECU. Project in execution. 5th EDF.

#### EQUATORIAL GUINEA

**Rural interventions.** Project stage: identification. 5th EDF.

**Rural development in the Bata district.** Estimated cost 3 mECU. Project stage: identification. Study by BDPA (F). 5th EDF.

#### ETHIOPIA

**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 '84. T.A.: GOPA (D). Project in execution. 4th EDF.

**Coffee improvement (phase 2).** Resp. Auth.: Ministry of Coffee and Tea Development. 27.2 mECU. Works, supplies. T.A.: Short-list already drawn-up. Int. tender for fertilizer, insecticides in '84. Project in execution. 5th EDF.

**Strengthening the rural engineering department of the Alemaya Agricultural College.** Resp. Auth.: University of Addis Ababa. 0.212 mECU. Stabex '81. Supply of laboratory equipment by int. tender. 5th EDF.

**Construction and equipment of one agricultural research station in Gondar and Gojam.** Resp. Auth.: Institute of Agricultural Research (I.A.R.). 2 mECU. Construction and equipping the station. Works: acc. tender. Supplies by direct agreement. Date financial decision December '83. Special programme hunger.

#### FIJI

**Forestry Logging Training School.** Resp. Auth.: Ministry of Forest. 0.400 mECU. Constructions and supply of equipment. Works by direct labour. Supplies: int. tender. Date financial decision June 84. 5th EDF.

#### GABON

**BOKOUE Reafforestation.** Resp. Auth.: Ministère des Eaux et Forêts. EDF part 2.78 mECU. T.A.: Short-list already drawn up. Int. tender for supplies launched in March 84. Date financial decision July 84. 5th EDF.

**Mini power-stations in Ovan and Mbigou.** Resp. Auth.: Ministère de l'Energie et des Ressources Hydrauliques. Estimated total cost 3 mECU. EDF 2 mECU and EIB (possibly) 1 mECU. Construction and supply of equipment. Ovan: 99 KW, Mbigou 225 KW. Project on appraisal. 5th EDF.

★ **Line of credit to S.M.E.** Resp. Auth.: Secrétariat d'Etat aux P.M.E. Estimated cost 0.500 mECU. Intervention for semi-industrial and artisanal fishery. Project on appraisal, 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, 3rd quarter 1984. 4th 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. Halcrow-U.L.G. (UK). Study: rehabilitation irrigation project: HED-ESELSKABET (DK). 5th EDF.

**Aveyme livestock development.** Resp. Auth.: Ministry of Agriculture. 3.2 mECU. Works, supply of vehicles and equipment, T.A.: short-list already drawn up. 5th EDF.

**Ghana Commercial Bank (GCB). Small-Scale Farmers' Scheme.** Resp. Auth.: Agricultural Finance Department of GCB. 0.847 mECU. Stabex 81. Purchase of tractors, vehicles and rice hullers. Int. tender and direct agreements. Project in execution. 5th EDF.

**Ghana Cocoa Marketing Board. Vehicle Workshop.** Resp. Auth.: Cocoa Marketing Board. (CMB) 2.936 mECU. Stabex 81. Completion and construction of workshops. Supply of equipment and T.A. Works by acc. Tender. Supplies: int. tender. T.A.: direct agreement. Project in execution. 5th EDF.

**Second Line of Credit to the National Investment Bank (NIB).** Resp. Auth.: Development Service Institute of NIB. 2.9 mECU. T.A. and supply of equipment. Date financial decision May 84. 5th EDF.

**Assistance to Ghana Stone Quarry and Kas Products Ltd.** Resp. Auth.: Bank for Housing and Construction. 1.670 mECU. Stabex 81. Equipment and spare parts. Date financial decision June 84. 5th EDF.

**Line of Credit to the Agricultural Development Bank.** Resp. Auth.: Agric. Dev. Bank (ADB) 6mECU. Purchase of marine diesel engines, spare parts, fishing net, and T.A. Date financial decision June 84. 5th EDF.

## GRENADA

**Eastern main road rehabilitation. Phase 2.** Repairing and strengthening of a section of the circular road. Estimated cost 1.5 mECU. Project in execution. 5th EDF.

**Hillsborough jetty.** Resp. Auth.: Ministry of Public Works. 0.357 mECU. Construction of a jetty for goods and passenger handling. 5th EDF.

**Rehabilitation of the Grenville nutmeg factory.** Resp. Auth.: Ministry of Agriculture. Stabex 81. 0.043 mECU. Works by direct labour. Date financial decision July 84. 5th EDF.

★ **Institute for further education.** Resp. Auth.: Ministry of Education. Renovation and new construction. Supply of equipment. Estimated cost 0.450 mECU. Project on appraisal. 5th EDF.

★ **Tourism promotion.** Resp. Auth.: Tourism Department. Estimated cost 0.110 mECU. Printing of brochures, leaflets, dias and supply of equipment. Project on appraisal. 5th EDF.

## GUINEA

**Land development in Kankan and Labé regions. Phase II.** Resp. Auth.: Ministère de l'Agriculture et des F.A.P.A. Valuation: Mac Donald and Partners (UK). Project on appraisal. 5th EDF.

**New energy research and test.** Resp. Auth.: Ministère de l'Energie et du Konkourè. Study on hand. 5th EDF.

**Rural development of the Kankan-Siguiri Region.** Resp. Auth.: Ministère de l'Agriculture, des Eaux, Forêts et FAPA. 6.350 mECU. Rural infrastructure, supply of rural inputs, equipment, vehicles and T.A. T.A.: CFDT (F). Project in execution. 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.

**Establishment of a Child Health and Nutrition Institute (ISNI) in Conakry.** Resp. Auth.: Ministère des Affaires Sociales. 2 mECU. Construction and supply of equipment by int. tender with competition after prequalification. Prequalification launched in July 84. Date financial decision May 84. 5th EDF.

**T.A. and complementary equipment for the "Institut Polytechnique Secondaire Maritime" (IPS) in Conakry.** Resp. Auth.: Ministère de l'Enseignement Moyen et de la Formation Professionnelle. T.A. and equipment by restr. tender after prequalification. Prequalification done. 1.260 mECU. Project in execution. 5th EDF.

**Sanoyah textile factory (CTS). Supply of T.A. and generating sets.** Resp. Auth.: Gov. of Guinea. 8.5 mECU. Int. tender for generating sets launched in May 84 (conditional). Date financial decision July 84. 5th EDF.

**Ignace Deen hospital renovation in Conakry.** Resp. Auth.: Ministère de la Santé Publique. 5 mECU. Works and supplies by int. tender. Works supervision by direct agreement. Date financial decision July 84. 5th EDF.

## GUINEA BISSAU

**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. Supply of equipment: int. tender on 2nd half 84. T.A.: Ass. Engineers (I). Project in execution. 5th EDF.

**North-East forestry development.** Resp. Auth.: Commissariat général au développement rural. Study under way by Atlanta (D). 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. Project on appraisal. Date foreseen for financial decision 2nd half 84. 5th EDF.

**Reconditioning of 3 self-propelled ferries.** Resp. Auth.: Gov. of G.B. 0.390 mECU. Supplies by direct agreement. Training. Date financial decision July 84. 4th EDF.

## GUYANA

**Fishing port and fish-market in Georgetown.** Building of a new port and fish market in Georgetown. 2.700 mECU. Supervision of work: LIBURD (ACP). 5th EDF.

**Sysmin. Bauxite Advance.** 3 mECU. Spare parts supply by direct agreement and study on the European market. Project on appraisal. 5th EDF.

## IVORY COAST

**Oil-palm tree plantation extension programme.** Resp. Auth.: Ministère de l'Agriculture and "Palminindustrie". Estimated total cost 18.2 mECU. EDF 10.306 mECU. Local 7.85 mECU. 12,517 h of palm tree plantations. Project in execution. 5th EDF.

★ **Coffee-shrub regeneration programme.** Resp. Auth.: Ministère de l'Agriculture and SATMACI. Stabex 81. Supply of equipment, fertilizers and pesticides. Project on appraisal. 5th EDF.

## JAMAICA

**Board of Revenue — revenue information system.** Resp. Auth.: Govt of Jamaica. 3.26 mECU. Reorganization of the administration and preparation of the Revenue Information System. Supplies and T.A. Int. tender for supplies foreseen in 1st quarter '84. Supervision of project: X-TRA Consult. (B). Int. tender for supplies foreseen on 2nd half 84. Project in execution. 5th EDF.

**Citrus fruit production improvement.** Resp. Auth.: Ministère de l'Agriculture. Estimated cost 3.5 mECU. Equipment, training and T.A. Credit line. T.A.: Short-list already drawn-up. 5th EDF.

**Coffee development.** Resp. Auth.: Ministère de l'Agriculture. Estimated total cost 3.7 mECU. EDF 3.5 mECU. Local 0.2 mECU. Supply of equipment, T.A. and credit line. Project on appraisal. Date foreseen for financial decision October 84. 5th EDF.

**"Public Health Laboratory Services".** Construction and supply of equipment for a

new laboratory in Kingston. Training. Estimated total cost 5.230 mECU. EDF 4.900 mECU. Local 0.300 mECU. Project stage: identification. 5th EDF.

**Scientific Research Council (SRC).** Resp. Auth.: SRC 0.650 mECU. Supply of equipment, T.A. and training. Date financial decision July 84. 5th EDF.

★ **Bee-keeping Development Project.** Resp. Auth.: Ministry of Agriculture. Estimated cost 1.4 mECU. Supply of vehicles, T.A. and line of credit. Project on appraisal. 5th EDF.

## KENYA

**Eldoret Polytechnic.** Estimated cost. 6 mECU. Construction, supply of equipment (pedagogical) and T.A. Preliminary Plan Study: Hughes & Polkinghorne (ACP). Project on appraisal. 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 2nd half '84. T.A.: direct agreement. 5th FED.

**Turkwell hydro-electric project.** Resp. Auth.: Ministry of Energy. Feasibility study and final study design: PREECE CARDEW RIDER (UK). Project on appraisal. 5th EDF.

**Machakos Integrated Development Programme. Phase II.** Resp. Auth.: Ministry of Finance and Planning (MFP). 15.2 mECU, EDF part. Local 6.5 mECU. Works, supplies and T.A. Date financial decision July 84. 5th EDF.

**Bura Management II.** T.A. for the management of the Bura Irrigation and Settlement Scheme. (West Bank of the Lower Tana). 1.55 mECU. Project on appraisal. Date foreseen for financial decision September 84. 5th EDF.

**Strengthening of existing facilities for research in the field of public health.** Construction of a laboratory by int. tender. Work supervision by direct agreement. 1 mECU. Project on appraisal. 5th EDF.

## LESOTHO

**Maseru airport.** Resp. Auth.: Ministry of Transport and Communication. Estimation ±60 mECU. EDF part 3 mECU. Provision of a modern international airport 15 km south of Maseru. Foreseen funding: Lesotho - Saudi Fund - Kuwait Fund - ABEDA 4.4 mECU - OPEC - Abu Dhabi - ADB - EDF and Finland. - Date financial decision July 84. Int. tender (EDF part) for navigational aids launched in August 84. 4th EDF.

**Mohale's Hoek - Quthing road. Mohale's Hoek-Mekaling part.** Resp. Auth.: Central Planning and Dev. Office. Reinstatement of a road. 25 km. Estimated cost ±14 mECU. Int. tender launched in April 84. Supervision of works: restr. tender short-list drawn up. 5th EDF.

**Primary School Development Project Extension.** Resp. Auth.: Ministry of Works and Ministry of Education. 0.307 mECU. Works by acc. tender. Supplies by direct agreement. Project in execution. 4th 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 Sino counties. Works by acc. tender. — Supplies by int. tender in '84. Project in execution. 4th EDF.

**Buto oil palm. Phase II.** Resp. Auth.: Ministry of Agriculture. Continuation of the existing project in connection with the construction of an oil mill. T.A. and supply of equipment. Project on appraisal. 5th EDF.

**Improving agricultural training in the Rural Development Institute (R.D.I.).** Resp. Auth.: Ministries of Agriculture and Education. 0.880 mECU. Works, supply of equipment and training. Project in execution. 5th EDF.

★ **Development of Harper Port.** Resp. Auth.: National Port Authority. Estimated cost 8 mECU. Rehabilitation and fendering of the existing jetty, dredging in the harbour basin, services. Project on appraisal. 5th EDF.

★ **Rural Water Supply.** Resp. Auth.: Ministry of Rural Dev. Estimated cost 2.5 mECU. Project on appraisal. 5th EDF.

## MADAGASCAR

**Intermediate level health infrastructure strengthening.** Resp. Auth.: Ministère de la Santé. Estimated total cost 4.820 mECU. Works, supply of equipment, training and T.A. Project in execution. 5th EDF.

**Supply of equipment for rural and road transport.** Cofinancing with CCCE (F), KFW (Germany) and World Bank. Estimated total cost 17.828 mECU. EDF part 2.2 mECU. Project on appraisal. Date foreseen for financial decision October 84. 5th EDF.

★ **Ankaramena — Jhossy Road.** Resp. Auth.: Ministère des T.P. Estimated cost 4.8 mECU. Reinstatement of 52 km. Works and supervision. Works by int. tender. Project on appraisal. 5th EDF.

★ **Rehabilitation of «Centre Semencier Riz» in Marofariby.** Resp. Auth.: Ministère de la Production Agricole et de la Réforme Agraire. Estimated total cost 1.875 mECU. Works, supply of equipment and training. Project on appraisal. 5th EDF.

## MALAWI

**Salima Lakeshore Agricultural Development Division (SLADD) Phase IV.** Resp. Auth.: Ministry of Agriculture. Estimated cost: 19.1 mECU. EDF 9.5 mECU. Local 9.6 mECU. Works, Supplies and T.A. Project in execution. T.A.: restr. tender, short-list drawn up. 5th EDF.

**Central and northern region fish farming development, training and research.** Resp. Auth.: Ministry of Agriculture. Estimated cost: 3 mECU. Works, supplies, T.A. Project on appraisal. 5th EDF.

**Strategic fuel reserve.** Resp. Auth.: Economic Planning Division. OPC. 4.2 mECU. Construction of tanks farm for gasoil, petrol, ethanol. Associated infrastructure and equipment. T.A. Project on appraisal. 5th EDF.

**Small Enterprise Development Organisation of Malawi (SEDOM) — Phase II.** Resp. Auth.: Sedom secretariat. Estimated

total cost 5.4 mECU. Works by direct labour. Supply of vehicles and equipment by int. tender in '85. T.A. end '84. Project on appraisal. 5th EDF.

**Ntchisi Project Area. Phase II.** Resp. Auth.: Ministry of Agriculture. Estimated total cost 6.4 mECU. EDF 3.6 mECU, local 2.8 mECU. Works, supplies and operating costs. Project on appraisal. 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. Architectural and technical studies: GOUSIER (F). T.A.: Short-list already drawn up. 4th EDF.

**High voltage line transformer stations. Sélingué-Kalana.** Resp. Auth.: Ministère d'Etat chargé de l'Équipement (Office d'Exploitation des Ressources hydrauliques du Haut Niger — OERHN). 3.2 mECU. Int. tender (conditional) launched in March 84. Date financial decision July '84. 5th EDF.

**Refrigerated slaughterhouse in Bamako (Rehabilitation Project).** Resp. Auth.: Ministère du Dév. Rural. 1 mECU. Renovation and purchase of equipment and machinery. To purchase 6 refrigerated vans int. tender. The rest, acc. tender and direct agreement. Project in execution. 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 under way. Medical-technical equipment int. tender, 2nd half '84. Project in execution. 4th EDF.

**Small dams construction in the Hodhs region.** Resp. Auth.: Ministère du Développement rural. Estimated cost 2 mECU. Study under way. Binnie and Partners (UK). Project on appraisal. Project stage: identification. 5th EDF.

**Nouakchott Wharf.** Resp. Auth.: Ministère de l'Équipement et des Transports. Estimated cost 1.6 mECU. Maintaining, equipment and repairing. Date financial decision July 84. 5th EDF.

**Aioun El Atrouss hospital.** Resp. Auth.: Ministère de l'Équipement. 1.050 mECU. Renovation and supply of equipment for 3 buildings. Works by acc. tender. Supplies by int. tender. Project on appraisal. 5th EDF.

**«Centre de Formation Professionnelle Maritime de Nouadhibou (C.F.D.M.).** Resp. Auth.: Ministère de l'Équipement. 2.5 mECU. Construction, supply of equipment and purchase of a wooden-trawler, T.A. Project on appraisal. Date foreseen for financial decision 2nd half 84. 5th EDF.

**Supply of drilling equipment.** Resp. Auth.: Ministère de l'Hydraulique et de l'Énergie. Direction de l'Hydraulique. 0.943 mECU. Supply and installation by direct agreement. T.A.: by direct agreement. Date financial decision July 84. 5th EDF.

## MAURITIUS

**Development of Ile Rodrigues.** Resp. Auth.: Ministry of Agriculture. 3 mECU. Development centred on agricultural produc-

tion. Economical and technical study, on the way. T.A.: Luxconsult (Lux.). 5th EDF.

★ **Phoenix — Nouvelle France Road.** Resp. Auth.: Ministère du Plan et du Dév. Ministère de Finances. Total estimated cost 14 mECU. EDF  $\pm$  8.5 mECU, FAC(F)  $\pm$  2.6 mECU, Local  $\pm$  2.9 mECU. Upgrading of the road. EDF part: works by int. tender. Tender dossier: SETEC (F). Project on appraisal. Date foreseen for financial decision October 84. 4th and 5th EDF.

**Cold stores for onions.** Resp. Auth.: Ministry of Economic Planning. Estimated cost  $\pm$  2.5 mECU. Cold stores for 1 500 T of onions. Int. tender dossier definition: Berlin Consult (D). T.A.: by direct agreement. Works and supplies: int. tender with competition foreseen in the 4th quarter 84. Project on appraisal. 5th EDF.

## NIGER

**Air Valley development.** Resp. Auth.: Ministère du Dév. Rural. Estimated cost 2.052 mECU. Hydro-agricultural works. Construction and equipping of wells. Equipping and operation of nurseries. T.A. and training. Works and equipment: int. tender. Project on appraisal. Date foreseen for financial decision September 84. 5th EDF.

**Rural health programme.** Resp. Auth.: Ministère de la Santé Publique et des Affaires Sociales. 4.5 mECU. Construction of a medical centre in Mirria and 14 rural dispensaries, supply of equipment and T.A. Works: acc. tender. Supply of equipment, medicines, vehicles and motor-cycles: int. tender. T.A.: restr. tender short-list done. Project in execution. 5th EDF.

★ **Reconstruction of the «Grand Marché» in Niamey.** Resp. Auth.: Ministère des Travaux Publics. Estimated total cost 16 mECU. EDF 10 mECU, C.C.C.E. (F) 6 mECU. Study: Kalt-Pouradier (ACP). Works by int. tender foreseen end 84. Project on appraisal. Date foreseen for financial decision October 84. 5th EDF.

★ **Hydro-agricultural development of Daibery.** Resp. Auth.: Ministère du Dév. Rural. Estimated cost 9.6 mECU. Feasibility study: Belgroma (B). Project on appraisal. 5th EDF.

## NIGERIA

**Kaduna afforestation project.** Resp. Auth.: Federal Department of Forestry. Estimated Cost 10 mECU. Feasibility study: EUROCONSULT (NL). Project on appraisal. 5th EDF.

## PAPUA NEW GUINEA

**Foodstuffs production on the south coast.** Resp. Auth.: Department of Primary Industry. E.D.F. part 3 mECU. Development of seasonal cultivation and marketing. Technical and economic studies. Definition of the project: Produce Studies Ltd. Consultant (UK). Project on appraisal. 4th EDF.

**Magi highway.** Resp. Auth.: Department of Transport. 3.5 mECU. Upgrading and sealing of a road section. Works: int. tender foreseen 2nd half '84. 5th EDF.

**Horis Grasslands cattle ranch and cocoa Project.** Resp. Auth.: Department of Primary Industry. 1.460 mECU. Works, supplies, T.A. and training. Project in execution. 5th EDF.

**Trade Promotion Programme.** Resp. Auth.: Trade and Investment Promotion Branch and Chamber of Commerce and Industry. 0.350 mECU. Date financial decision May 84. 5th EDF.

**Milne Bay Highlands Access Roads:** Wedau to Karagautu. Resp. Auth.: Departments of Works and Supplies (DWS). Stabex 81. 1.2 mECU. Works by direct labour. Date financial decision July 84. 5th EDF.

**Diesel Power Replacement Programme.** Resp. Auth.: Electricity Commission (ELCOM). Estimated cost 4.850 mECU. 4 small hydroelectric power plants with transmission lines extensions from existing grids. Project on appraisal. 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 Zaïre Nil Crest.** Resp. Auth.: Ministère de l'Agriculture. 13.8 mECU. Development of agricultural production and social-economic infrastructure. T.A.: INSTRUPA (D). Supply: int. tender in '84. Project in execution. 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.: GOPA (D). 5th EDF.

**Development of Préfecture de Butare. Priority actions.** Resp. Auth.: Ministères du Plan et de l'Agriculture. Total estimated cost 11.765 mECU. EDF 10.400 mECU. Local 1.365 mECU. Actions to improve rural products, S.M.E., handicrafts and administration. Works by direct labour or direct agreement. Supplies and equipment, int. tender or direct agreement. T.A.: CARL BRO (DK). Project in execution. 5th EDF.

**Food strategy — Priority measures.** Resp. Auth.: Government. 4 mECU. Construction of 4 warehouses for OPROVIA. Construction and equipping of stores, purchase and stocking of sorghum. Supply of equipment, fertilizers, T.A. and training. Works by direct labour or acc. tender. Supplies by int. tender or direct agreement. T.A. and training by direct agreement. Date financial decision December '83. Special programme hunger.

★ **Mapping, soil prospection and utilization.** Works by int. tender. Project stage identification. 5th EDF.

## ST. CHRISTOPHER AND NEVIS

★ **Nevis Water Supply Project.** Resp. Auth.: Ministry of Works 0.6 mECU. Installation of storage tank and piping. Project on appraisal. 5th EDF.

★ **Electricity Supply Project.** Resp. Auth.: Electricity Dept. 0.6 mECU. Upgrading electricity supply system. Project on appraisal. 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. Study: short-list already drawn up. Project on appraisal. 5th EDF.

**Tourism development project.** Resp. Auth.: Department of Tourism. 0.120 mECU. Preparation of promotion material and training. Project on appraisal. 5th EDF.

**Rural drainage project.** Resp. Auth.: Department of agriculture. Estimated cost 1.6 mECU. Study to define the project: Huntings (UK). Project on appraisal. Date foreseen for financial decision October 84. 5th EDF.

## ST VINCENT AND GRENADINES

**Livestock development project.** Resp. Auth.: Ministry of Agriculture. 0.415 m ECU. Works, equipment and supply of vehicles. T.A.: shortlist already drawn up. Project in execution. 5th EDF.

**Tourism development project.** Resp. Auth.: Department of Tourism. 0.125 mECU. Upgrading Department of Tourism and preparation of promotion material by CEGOS (F). 5th EDF.

## SENEGAL

**New energy research and test in rural region.** Resp. Auth.: Secrétaire 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: AGIP-AFOR (I). Equipments: int. tender in 84. Project on appraisal. 5th EDF.

**Gum-tree plantation.** Resp. Auth.: Ministère du Développement Rural. Estimated cost 2.5 mECU. Works, supplies and T.A. T.A.: Deutsche Forstinventur Service (D). Project in execution. 5th EDF.

**Sewerage of the "Guèule Tapée" district.** Resp. Auth.: Direction Générale des Travaux Publics. 4.5 mECU. Construction of canalization and pipes for rain waters. Improvement of the sewage network. Int. tender (conditional) launched in February 84. Date financial decision July 84. 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. 5th EDF.

**Noirot Bridge et Kaolack.** Resp. Auth.: Direction Générale Travaux Publics. Estimated cost 2.5 mECU. Existing bridge replacement with a new. T.A.: to prepare technical dossier for an int. tender with competition. Int. tender launched in May '84. T.A.: Bureau Obermaier (D). Project on appraisal. 5th EDF.

**Continuation of cereals-growing development in agricultural areas.** Resp. Auth.: Ministère du Dév. Rural-Société des Terres Neuves. Estimated cost 2.2 mECU. Works (roads, drillings, wells) supply of fertilizers, building materials and T.A. Project in execution. 5th EDF.

**Safe-keeping livestock programme.** Resp. Auth.: Soc. d'Intervention nationale dans la zone sylvo-pastorale. SODESP. 0.797 mECU. Stabex 81. Date financial decision March 84. 5th EDF.

**Podor rural irrigated areas. Phase II.** Resp. Auth.: Ministère du Dév. Rural. Société d'aménagement du Fleuve Sénégal et de la Falémé (S.A.E.D.). Estimated cost 2.4 mECU. Works by direct labour. Supply of motor-pumps by int. tender. Project on appraisal. 5th EDF.

**Consolidation of the livestock development programme.** Resp. Auth.: SODESP. Estimated cost 1.6 mECU. Study on the way by BESSEL Ass. (JK). 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. Project in execution. 4th and 5th EDF.

**Koinadugu — Phase II.** Resp. Auth.: Ministry of Agriculture and Forestry. Estimated total cost 8.370 mECU. EDF 7.5 mECU. Local 0.870 mECU. Buildings and housing, transport equipment, farm inputs, operation, maintenance, staff salaries. Project in execution. 5th EDF.

**Rural hydraulics.** Resp. Auth.: Ministry of Agriculture and Forestry. Estimated cost 1.55 mECU. Construction of water points for villages with 2000 inhabitants. Study to prepare project and appraisal: IWACO (NL). Project in execution. 5th EDF.

**Kambia Fishery Development.** Resp. Auth.: Ministry of Agriculture and Forestry. 0.900 mECU. Construction of 2 buildings and a boatyard, supply of boats, motors, vehicles and T.A. T.A.: Short-list already drawn up. 5th EDF.

**Economical study of the Sambamba-Kabala Road.** Short-list already drawn up. Project stage: identification. 5th EDF.

**Buildings for Njala University College (N.U.C.).** Resp. Auth.: Ministry of Education: 2.5 mECU. Construction of academic block and student hostel, supply of equipment and work supervision. T.A.: OLU WRIGHT ASS. (ACP). 5th EDF.

★ **Rubber development project.** Resp. Auth.: Ministry of Agriculture and Forestry. Estimated cost 5 or 6 mECU. Project on appraisal. 5th EDF.

★ **Rehabilitation of the Telecommunications Network.** Resp. Auth.: Post and Telecommunications Dept.: Estimated cost ±3.5 mECU. Project on appraisal. 5th EDF.

## SOLOMON ISLANDS

**Coconut industry development project.** Resp. Auth.: Ministry of Land and Natural Resources. Study on hand. Project stage: identification. 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. 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.: short list already drawn up. Land improvement works and estate infrastructure: contracts awarded. Supplies: int. tender in '84. Project in execution. 4th EDF.

**Bardheera Dam.** Resp. Auth.: Bardheera Dam Authority (BDA). 600 mECU. (Estimated) Dam Project 500 mECU. Powerline to Mogadishu 100 mECU. Funding: EDF, Italy, Germany, France, Saudi Arabia, Abu Dhabi, Kuwait Funds, FADES, Isl. Dev. Bank. Local. 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 223 000 ha of irrigated agriculture in the Juba Valley, and energy to Mogadishu. Civil works: first int. tender during 1984. Transmission lines int. tender in 1984. Equipment: powerhouse main equipment and auxiliary equipment, int. tenders in 1985. Gates, valves, intake equipment, int tender in 1986. Study: 4th EDF. Works: int. tender for site prospection launched in February 84. 5th EDF.

**Mogadishu Institute of Statistics.** Resp. Auth.: Ministry of Public Works. Estimated cost: 1 mECU. Supply: int. tender in '84. Project on appraisal. Date foreseen for financial decision 2nd half '84. 4th EDF.

**Development of pheniculture (date-palm).** Resp. Auth.: Ministry of Agriculture. 2.3 mECU. 1000 ha plantation in the North region. Supply of equipment, machines, inputs, rural monitoring. T.A. by French aid. Date financial decision July 84. 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. 5th EDF.

**"Aula Magna" Mogadishu National University.** Resp. Auth.: Ministry of Public Works. ±2.5 mECU. Project on appraisal. 4th EDF.

**Mogadishu Slipway.** Resp. Auth.: Ministry of Planning. Estimated cost 3 or 4 mECU. Feasibility study on the way by AVECO (NL). 4th EDF.

**Technical study of the Juba Valley Road.** Resp. Auth.: Ministry of National Planning and Ministry of Public Works. Engineering design and preparation of tender documents. Estimated cost 1 mECU. Short-list already drawn up: Project in execution. 5th EDF.

**Forestry Nursery Development.** Resp. Auth.: National Range Agency. 1.290 mECU. Supply of vehicles, equipment and materials for 10 nurseries. All by int. tender. launched in May 84. Date financial decision December '83. Special programme hunger.

★ **Upgrading of the road Afgoi-Shalambok-Goluen.** Resp. Auth.: Ministry of Public Works. Works by int. tender in 85. Supervision of works. Project on appraisal. 5th 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. ten-

der for fertilizers in 84. TA: Hunting Technical Services Ltd (UK). Project in execution. 4th EDF.

**Jebel Marra Rural Dev. Project. Interim phase.** Estimated total cost 9.092 mECU. EDF 2.1 mECU. Agricultural extension and improvement of rural infrastructure. Supply of road plant and vehicles and T.A. Date financial decision July 84. Supplies: int. tender launched in July 1984. 5th 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 m<sup>2</sup> each) dining hall and kitchen (360 m<sup>2</sup>), 3 college buildings (1 850 m<sup>2</sup>), 21 staff houses (each 170 m<sup>2</sup>). Works including infrastructure for water, sewerage and electricity: int. tender launched September '82. Equipment: int. tender in 1984. Supervision of works: HAMD I GROUP (ACP). Project in execution. 4th EDF.

**Port Sudan-Hayia railway.** Resp. Auth.: Sudan Railway Corporation. Expertise: KAMPSAX (DK). 4th EDF.

**Magwe — Upper Talanga feeder road.** Resp. Auth.: Ministry of Finance and Economic Planning. 1.170 mECU. Rehabilitation and regravelling of existing roads and construction of feeder roads. Preparation of the tender dossier: GITEC (D). Project in execution. 5th EDF.

## SURINAME

**Rice project at Coronie.** Resp. Auth.: Ministerie van Landbouw, Veeteelt, Visserij en Bosbouw. 7.650 mECU. Rice production developments. T.A. short-list already drawn up. 3rd and 5th EDF.

**LTS — Geyersvlijt.** Resp. Auth.: Public Works Department. Construction of school building. Lower level technical education. Estimated cost 2.8 mECU. Int tender foreseen in 84. Project in execution. 3rd EDF.

**Biomass energy project at Wageningen.** Resp. Auth.: Government. Installation of an energy generator on the basis of rice husks. Project stage: identification. 5th EDF.

**2nd Credit line for Landbouwbank.** Resp. Auth.: Landbouwbank N.V. Credits for agriculture, animal husbandry, fisheries and forestry. 7.5 mECU. Date financial decision May 84. 4th EDF.

★ **Artificial Insemination Project.** Resp. Auth.: Ministry of Agriculture, Fisheries 0.7 mECU. Building of a new station and provision of equipment and material. Project on appraisal. 5th EDF.

## SWAZILAND

**Rural hydraulics.** Resp. Auth.: Rural Water Supply Board. Estimated cost 2.456 m ECU. Study construction, works supervision. 12 villages. Supply of equipment and material. Study and works supervision: short-list already drawn up. 5th EDF.

**Teacher training colleges; Ngwane, Pigg's Peak.** Resp. Auth.: Ministry of Works. 7.4 mECU. Extension for Ngwane and new construction for Pigg's Peak. Supply of equipment and T.A. to prepare tender dossier and site supervision. For Ngwane acc. tender, for Pigg's Peak int. tender. Supplies: int. tender. T.A.: Cusdin, Burden and Howitt (ACP). 5th EDF.

**Rural Development Areas Programme. Phase II.** Resp. Auth.: Ministry of Agriculture. Estimated Cost 3.3 mECU. EDF 3 mECU, local 0.300 mECU. Farming inputs, T.A. and training. Project on appraisal. Date foreseen for financial decision 2nd half 84. 5th EDF.

★ **Smallholders Support Project, Credit and Marketing.** Resp. Auth.: Ministry of Agriculture. Estimated cost 3.650 mECU. Works, supplies, Line of credit, T.A. and training. Project on appraisal. 5th EDF.

## TANZANIA

**Lusahunga-Bukombe road.** Resp. Auth.: Ministry of Works. 20 mECU EDF part. Bitumen road of 127 km. Works: Int. tender foreseen 2nd half '84. Supervision of work: GITEC (D). Search for co-funding. 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 m<sup>2</sup>. Equipment: int. tender with possibility of direct agreement depending on nature of supply. Supplies: direct agreement, all in '84. 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 '84. Supplies: int. tender in '84. Supervision of works: G.W.E. (D). 5th EDF.

**Supply of materials and equipment for increasing food production and reducing post-harvest losses.** Resp. Auth.: Government. 2 mECU. Supply of steel, bolts, nuts, rivets and chemicals for agricultural tools. Fertilizers and insecticides. All by int. tender launched in August 84. Date financial decision December '83. Special programme hunger.

**Fuel-wood substitution programme.** Resp. Auth.: Government. 1 mECU. Date financial decision December '83. Special programme hunger.

**Coffee Development Programme. Phase II.** Resp. Auth.: Ministry of Agriculture. Continuation and consolidation of the Phase I. EDF part estimated contribution 9.5 mECU. Supplies: int. tender launched in July 84. Project on appraisal. 5th EDF.

## TOGO

**Provisions improvement for Agou oil palm plant.** Resp. Auth.: Ministère du Développement Rural. EDF 5 mECU. Project on appraisal. 5th EDF.

**Draught animal farming development.** Resp. Auth.: Ministère du Développement Rural. Estimated total cost 2.300 mECU. EDF 0.700 mECU. US aid 1.275 mECU. Local 0.325 mECU. Supply of equipment and T.A. Creation of a revolving fund. T.A.: Short-list for restr. tender already made. Project in execution. 5th EDF.

**Supply of 300 pumps with foot or hand drive system.** Resp. Auth.: Ministère des T.P., des Mines, de l'Énergie et des Remontes Hydrauliques. Direction de l'Énergie et de l'Hydraulique. Int. tender launched in

July 84. Estimated cost 0.300 mECU. 5th EDF.

★ **Enquiry into consumer expenditures.** Resp. Auth.: Ministère du Plan, de l'Industrie et de la Réforme Administrative. Estimated total cost 1.3 mECU. EDF 1 mECU, Local 0.3 mECU, T.A. to produce, collect and treat statistical data, training and supply of equipment. Project on appraisal. 5th EDF.

#### TONGA

**Supply of a dredger.** Resp. Auth.: Ministry of Works. Estimated cost 0.500 mECU. Technical study: EUROCONSULT (NL). Int. tender foreseen 2nd half '84. Project on appraisal. 5th EDF.

**Faua Fisheries Harbour.** Resp. Auth.: Ministry of Works. Estimated cost 3.3 mECU. Construction of a new fisheries harbour, repair yards, fish market and wholesale store with ice-making equipment. Int. tender for the supply of sheet steel piles launched in November 83 (conditional). Supply of cooling and ice equipment int. tender in 84 or 85. Works by direct labour. Project in execution. 5th EDF.

#### TRINIDAD AND TOBAGO

**Training programme, health sector.** Resp. Auth.: Ministry of Health and Environment. 1.2 mECU. Training awards, laboratory equipment (sound-meters, chemical chromatographs, spectrometers) by int. tender. Short-term T.A. to coordinate and establish new laboratory. Date financial decision May 84. 5th EDF.

#### TUVALU

**Coastal protection project.** Resp. Auth.: Ministry of Works. 0.379 mECU. Works, supplies and supervision of works. Project on appraisal. Date foreseen for financial decision September 84. 5th EDF.

**Low voltage distribution.** Resp. Auth.: Tuvalu Electricity Authority 0.305 mECU. Extension of the LV distribution network. Supply and installation of transformers by int. tender. Project on appraisal. Date foreseen for financial decision September 84. 5th EDF.

#### UGANDA

**Primary health centres rehabilitation.** Resp. Auth.: Ministry of Health and Ministry of Local Government. 5.8 mECU. To improve health care in rural areas. Project stage: identification. 4th and 5th EDF.

**Kampala water supply rehabilitation. Phase II.** Resp. Auth.: Ministry of Lands, Minerals and Water Resources. 5.27 mECU. Works, supplies and supervision. T.A. Project in execution. 5th EDF.

**Artisanal Fisheries Rehabilitation.** Resp. Auth.: Ministry of Animal Industry and Fisheries. 6 mECU. Supply of fishing equipment and materials and T.A. Supplies int. tender launched in May 84. T.A.: restr. tender short-list done. 5th EDF.

**Kampala-Masaka Road. 2nd section.** Upgrading of the road over 60 km. Study: short-list done. Estimated cost 0.200 mECU. Works by int. tender foreseen in November 84 (conditional). Estimated cost 10 mECU. Project on appraisal. 5th EDF.

★ **Conservation of natural resources.** Resp. Auth.: National Board of Trustees of the Uganda National Parks. Estimated cost

3.1 mECU. Works, supply of equipment, training and T.A. Project on appraisal. Date foreseen for financial decision October 84. 4th EDF.

#### BURKINA FASO (Ex UPPER VOLTA)

**Mine of Poura rehabilitation.** Resp. Auth.: Ministère du Commerce, du Développement Industriel et des Mines. 4.14 mECU for assessment of the worker's town. Project in execution. 5th EDF.

**Development of the Douna plain.** Resp. Auth.: Ministère du Développement Rural. 10 mECU. Irrigation and drainage works, supply of equipment, inputs and T.A. Int. tender for works launched in May 84. 5th EDF.

**Young farmers' training.** Resp. Auth.: Ministère du Développement Rural. 2.880 mECU. T.A., works and equipment. T.A.: C.E.R.E.D. (F). Project in execution. 5th EDF.

**Small ruminants and poultry farming in the Yatenga region.** Resp. Auth.: Ministère du Développement Rural. 1.150 mECU. Constructions, supply of equipment, training and monitoring. Project in execution. 5th EDF.

**Strengthening of the health service in the North and Sahel Regions.** Resp. Auth.: Ministère de la Santé. 1.3 mECU. T.A., training, works and supply of equipment. Project in execution. 5th EDF.

★ **Development of the traditional poultry farming.** Resp. Auth.: Ministère du Dév. Rural. Estimated cost 0.750 mECU. Supply of equipment, vaccines and vehicles. Project on appraisal. 5th EDF.

#### VANUATU

**Village fisheries, Research and development.** Resp. Auth.: Fisheries Department. 0.600 mECU. Promotion and improvement of artisanal fishing. Project in execution. 5th EDF.

#### ZAIRE

**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. Int. tender (conditional) launched in May 84. 5th EDF.

**Kalemie port rehabilitation.** Resp. Auth.: Département des Transports et Communications. 2 Int. tenders (conditional) launched in March 84. Works and supplies. Project on appraisal. Date foreseen for financial decision November 84. 5th EDF.

**Banana deep water port.** Resp. Auth.: Département des Transports et Communications. Economic and financial evaluation: SEMA (F). 5th EDF.

**Butembo-Beni hydro-electrical development.** Preliminary study done by Traktionnel (B) on local funds. Detailed economic and technical studies: WLPU (UK). Project on appraisal. 5th EDF.

**Rural roads in Sud-Ubangui.** Resp. Auth.: Office des Routes. Total cost 5.19 mECU. EDF 4.950 mECU, CDI (Centre de Développement Intégral de Bwamandango) 0.24 mECU. Works by CDI and villages. Supply of graders, trucks by int. tender, on 2nd half '84. Project in execution. 5th EDF.

★ **T.A. to the SME in the Shaba district.** Resp. Auth.: Association Nationale des En-

treprise du Zaïre (ANEZA). Industrial and trade promotion. 0.559 mECU. Project on appraisal. 5th EDF.

#### ZAMBIA

**Support for Food Policy. Production and storage.** Resp. Auth.: Ministry of Agriculture and Water Development. 4 mECU. Supply of materials and equipment. Works and T.A. by direct agreement. Supplies by int. tender launched in July 84. Date financial decision December '83. Special programme hunger.

**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.

**Animal vaccine unit production.** Laboratory construction. Supply of equipment and T.A. Estimated cost 3.79 mECU. EDF 3 mECU, local 0.79 mECU. T.A.: short-list already drawn up. 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.

**Mpongwe development project, phase 2.** Resp. Auth.: Ministry of Agriculture and Water Development. (M.A.W.D.) 3.712 mECU. To complete and develop existing project. Works, supplies and T.A. Project on appraisal. 5th EDF.

#### ZIMBABWE

**Rural clinics.** Resp. Auth.: Ministry of Health. 4.5 mECU. Construction and equipment of 64 rural clinics and 128 staff houses. Works: direct labour. Equipments: int. tender 2nd half 84. (Non associated dev. countries budget).

**Rural water supply — accelerated programme for drought relief in Victoria Province.** Resp. Auth.: Ministry of Water Resources and Development. Total cost 3.9 mECU. EDF 2.5 mECU. EDF part: drilling and linings. Works: short-list done. Project in execution. 5th EDF.

**Small-holder Coffee and Fruit Development Programme.** Resp. Auth.: Ministry of Lands, Resettlement and Rural Development. Estimated total cost 6.8 mECU. EDF 5 mECU, local 1.8 mECU. Project on appraisal. 5th EDF.

## Overseas Countries and Territories (OCT)

#### ANGUILLA

**Road Bay jetty and port facilities.** Resp. Auth.: Gov. of Anguilla and British Development Division (Barbados). Estimated cost 0.7 mECU. Expertise for technical and economic appreciation and to prepare designs and tender documents. Short-list already drawn up. Project stage: identification. 5th EDF.

## NETHERLANDS ANTILLES

**Road improvement on Bonaire.** Resp. Auth.: Departement voor Ontwikkelingssamenwerking. 1 mECU. Date financial decision April 84. 5th EDF.

**Curaçao slaughter-house.** Resp. Auth.: Departement voor Ontwikkelingssamenwerking, Willemstad, Curaçao. Estimated cost 3.45 mECU. Project on appraisal. 5th EDF.

★ **Line of credit to the Aruba Dev. Bank to improve agriculture livestock and fishery.** Resp. Auth.: Departement voor ontwikkelingsamenwerking. Estimated cost 0.3 mECU. Project on appraisal. 4th 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. Cofinancing with France. Project on appraisal. 4th EDF.

**Reafforestation project.** 1.319 mECU. Caribbean pines for Marquises and Société Archipelago. Works by direct labour. Supplies by int. tender and T.A. by direct agreement. Date financial decision July '84. 5th EDF.

## NEW CALEDONIA

**Reafforestation programme.** Resp. Auth.: Territoire de la Nouvelle Calédonie des Eaux et Forêts. Estimated total cost 4.7 mECU. EDF part ±3 mECU. Cofunding with France, CCCE (F) and Local. 3,000 ha plantation "Pin de Caraïbes" with all necessary infrastructure and investments. Project on appraisal. 5th EDF.

## MAYOTTE

**Mayotte Water Supply.** Resp. Auth.: Collectivité territoriale de Mayotte. Direction de l'Agriculture. 4.28 mECU. Construction of a drinking water network. Works and supplies by int. tender launched in July 84. Date financial decision May 84. 4th and 5th EDF.

## TURKS AND CAICOS ISLANDS

**Transport study, North and Middle Caicos.** Resp. Auth.: Public Works Department. Wallace Evans and Partners (UK). 5th EDF.

## MONTSERRAT

**Water Supply Project.** Resp. Auth.: Montserrat Water Authority and Ministry of Public Works. 1.1 mECU. Project planning: Short-list already drawn up. Project on appraisal. 4th and 5th EDF.

## PACIFIC OCT

**Regional programme rural photovoltaic electrification.** Estimated total cost 4.15 mECU. EDF 2.884 mECU. T.A. by direct agreement. Supplies by int. tender. Project on appraisal. 5th EDF.

# Regional Projects

## O.C.A.M.

**Inter-state scientific school of veterinary medicine (EISMV), Dakar.** Resp. Auth.: EISMV Secretariat. 0.455 mECU. Construc-

tion work for a three-storey building, supply of equipment and supervision of works. Date financial decision June 84. 5th EDF.

★ **Institut Africain d'Informatique (I.A.I.).** Resp. Auth.: I.A.I. secretariat in Libreville-Gabon. Estimated cost 2.8 mECU. Building extensions. Project on appraisal. 5th EDF.

## CENTRAL AFRICAN REP. — CONGO

★ **Aid to the "Service Commun d'Entretien des Voies Navigables. (SCEYN).** Estimated cost 5.1 mECU. Supply of equipment and improvement of the maintenance base in Bangui. Project on appraisal. 5th EDF.

## CONGO-GABON

**Haut-Ivindo iron mine.** Resp. Auth.: Ministère des Mines et de l'Energie (Congo) — Ministère des Mines, et du pétrole (Gabon). EDF 7 mECU. Mapping, soil survey, borings. Study to be done. Int. tender (conditional) launched in July 83. Date foreseen for financial decision September 84. 5th EDF.

## MEMBER COUNTRIES OF CEAO

**ESITEX Ségou (Mali).** Resp. Auth.: CEAO Secretariat. Management training for textile industry. Complex construction in Ségou. 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, BAD, D. Works: prequalification launched in October 83. Date financial decision May 84. 5th EDF.

## WESTERN AND CENTRAL AFRICAN COUNTRIES MEMBERS OF CONFERENCE MINISTERIELLE SUR LE TRANSPORT MARITIME

**Académie régionale des Sciences et techniques de la mer in Abidjan.** Resp. Auth.: Ministère de la Marine Ivory Coast. Estimated total cost 32 mECU. EDF part for pedagogical equipment 2 mECU. Int. tender (conditional) foreseen early 84. Works, T.A. and other equipments: BAD, Japan, Norway, UNDP, France and local. Date foreseen for financial decision 2nd half 84. 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-Rijks-waterstaat-Waterloopkundig Laboratorium Delft (NL). For Phase I — Phase II: Rhein-Ruhr (D). Project stage: identification. 5th EDF.

★ **Agronomical study for the area concerned by the bridge barrage.** Short-list already drawn up. 5th EDF.

## GUYANA — SURINAME

**Guyana — ferry-link.** Resp. Auth.: Ministry of Public Works and Ministère van Openbare Werken. Link ferry on Corentine river. Study on the way by C.A. Liburd and Ass. + Sescon Group (ACP). Project on appraisal. 4th EDF.

## MEMBER COUNTRIES OF M.R.U. (MANO RIVER UNION)

**Telecommunication and Postal Training Institute (TPTI) of the MRU.** Resp. Auth.: MRU Secretariat in Freetown. Extensions, supplies and training. Estimated total cost 8.5 mECU. EDF 2.5 mECU. Project on appraisal. 5th EDF.

## BENIN — IVORY COAST — NIGER — TOGO — BURKINA FASO

**Regional training centre for road maintenance in Lomé-Togo. (CERFER).** Resp. Auth.: Secretariat CERFER. Training. T.A. and scholarships. Estimated cost 1.08 mECU. Project on appraisal. Date foreseen for financial decision September 84. 3rd, 4th and 5th EDF.

## RWANDA — ZAIRE

**Methane gas from Lake Kivu.** Resp. Auth.: CEPGL and Commission mixte de 2 pays. 1.7m ECU. 2 stations with urea unit, compressed gas and methane. Int. tenders on the way. Project on appraisal. Date foreseen for financial decision September 84. 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.

## ZAIRE — CONGO — GABON — SAO TOME AND PRINCIPE — EQUATORIAL GUINEA

★ **Fishery development in the Gulf of Guinea.** Estimated cost ±5 mECU. Project on appraisal. 5th EDF.

## MEMBER COUNTRIES 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.

## MEMBER COUNTRIES OF AATPO

**Trade Promotion, African Association of Trade Promotion Organizations (AAR-PO).** Resp. Auth.: Board of the Association in Tangier. 0.220 mECU. T.A. training and equipment. Date financial decision April 84. 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 already drawn up. Project on appraisal. 4th EDF.

## FRENCH-SPEAKING AFRICAN AND INDIAN OCEAN ACP COUNTRIES

**Ecole de statistiques d'Abidjan.** Resp. Auth.: Ministère du Plan et de l'Industrie. Total estimated cost 3.7 mECU. EDF 2 mECU. Ivory Coast 1.7 mECU. Construction and equipments. Architectural study: Bureaux DLM. Architects and Cabinet AR-CAUD (ACP). Project in execution. 4th EDF.



## WESTERN SAMOA — FIJI — SOLOMON — KIRIBATI — TUVALU — PAPUA NEW GUINEA — TONGA — VANUATU

**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. Feasibility study on the way: LAHMEYER and DORNIER (D). Works, supply and T.A. Supplies: int. tender 2nd half 1984. T.A.: restr. tender short-list done. Project in execution. 5th EDF.

## TOGO — MALI — BURKINA FASO — NIGER — CHAD

**Agricultural products regional transit centre, in the Lomé port.** Resp. Auth.: Ministères du Plan. Estimated total 7 mECU with cofunding. Technical and economic feasibility study: Bureau SATEC (F). Project stage: identification. 4th and 5th EDF.

## MEMBER COUNTRIES OF UDEAC

★ **Sub-Regional Institute for Applied Technology and Planned Economy (ISTA).** Resp. Auth.: ISTA Secretariat in Libreville-Gabon. Estimated cost ±6 mECU. Building centre construction and T.A. for 3 actions. Project on appraisal. 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 processing equipment, int. tender. Project in execution. 4th and 5th EDF.

## SENEGAL - MAURITANIA - MALI NIGER - BURKINA FASO

**Environmental conservation in Sahel countries.** Resp. Auth.: Governments of the 5 countries. Exploitation of existing boreholes for SE — Support for reforestation programmes for MAU — Support for reforestation and savings on fuel wood for MA. Establishment of a forestry fund for NI — Promotion of village tree-planting schemes on the Mossi plateau for Burkina Faso. T.A. by direct agreement only for SE. Other actions by direct labour. Date financial decision December '83. Special programme hunger.

## MEMBER COUNTRIES OF CEAO AND CILSS

**Construction of Centre Régional d'Énergie Solaire (CRES) in Bamako, Mali.** Estimated total cost 30 mECU. EDF part. 2.270 mECU. T.A. and equipment. Project in execution. 5th EDF.

## MEMBER COUNTRIES OF CILSS

**Provisional survey of natural renewable resources in the Sahel.** Resp. Auth.: CILSS

Secretariat. Estimated cost 6 mECU. EDF ±2 mECU. Setting up of an observation unit to forecast crop production. Remote sensing by satellite, air survey and ground control. Project on appraisal. 5th EDF.

**Project to improve the means of monitoring on a permanent basis agricultural production and stock-raising.** Resp. Auth.: CILSS secretariat. ±3.130 mECU. Studies for means to produce, collect and treat agricultural production and stock-raising data. T.A., vehicles and data collecting and processing equipment. Date financial decision April '84. 4th and 5th EDF.

**Millet, maize, sorghum and niébé project.** Resp. Auth.: CILSS Secretariat. Estimated cost 2 mECU. To provide improved varieties for farmers. Local tests. Purchase of vehicles and equipment and to take charge for local tests control staff. Project stage: identification. 5th EDF.

**Setting up of a system to estimate cereal stocks in private hands.** Resp. Auth.: CILSS Secretariat. Estimated cost 1 mECU. EDF 0.5 mECU FAC 0.5 mECU. Creation of a system to monitor permanently the global availability of food stocks. T.A. and equipment. Project stage: identification. 5th EDF.

**Fight against drought in the Sahel.** Resp. Auth.: CILSS Secretariat. Estimated cost 1 mECU. T.A. and experts for the CILSS Executive Secretariat. Project stage: identification. 5th EDF.

**Regional coordination of food production and distribution of improved cooking stoves.** Resp. Auth.: CILSS Secretariat. Studies on food marketing, pricing and trading. Studies and aids for improved cooking stoves distribution. Estimated cost 0.276 mECU. Project stage: identification. 5th EDF.

## AFRICAN ACP COUNTRIES

**T.A. for statistical training to the Training Centres associated in the "Programme de formation statistique pour l'Afrique" (P.F.S.A.).** 0.925 mECU. T.A., training, seminars and supply of equipment. Date financial decision July 84. 5th EDF.

## SAHARAN PERIPHERY

**Characterization by remote sensing of the dynamics of the desertification in the Saharan periphery.** 2 mECU. 1st part.: Purchase and installation of the equipment. First data processing and distribution. 2nd part: Research and Development operations. Execution in Europe with local missions. Contracts by direct agreement. Regional coordination in Europe: CRC in Ispra. National coordination in Europe: representatives from each European organization or institute. ESA participation for the Maspalomas station and of Institutes and Organizations for the Research from the 10 countries Members of the EC. Date financial decision December '83. Special programme hunger.

## MEMBER COUNTRIES OF U.A.P.T.

**Satellite telecommunications project.** Resp. Auth.: U.A.P.T. Secretariat in Brazzaville. R.P.C. Parametric study on the way by national organizations of I, UK, F and D. Project stage: identification. 5th EDF.

## EASTERN AFRICAN 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-rooms, offices and housing. Project stage: identification. 5th EDF.

## INDIAN OCEAN ACP COUNTRIES

**Assistance for training, research and T.A.** 1 mECU. Training, seminars, studies, T.A. for the "C.O.I." Commission de l'Océan Indien. Comores, Madagascar, Mauritius, Seychelles. Date financial decision May 84. 5th EDF.

## DJIBOUTI-ETHIOPIA

**Djibouti-Ethiopia Railways. Phase II.** Resp. Auth.: CFDE (Compagnie du Chemin de Fer Djibouti-Ethiopie). Estimated total cost 28 mECU EDF 15 mECU, France 13 mECU. Supply of rails, wagons and equipment. Int. tender foreseen in June or July 84. Date financial decision June 84. 5th EDF.

## KENYA — UGANDA

★ **Turbo-Webuye Road.** Resp. Auth.: Ministry of Public Works, Kenya. Estimated cost 10 mECU. Works and supervision foreseen end 84. Project on appraisal. 5th EDF.

## GAMBIA — SENEGAL

**Ndama production research.** Estimated total cost 13.620 mECU. EDF 2.5 mECU other sources ODA, ADB, FAO. Research project to be implemented by ILRAD-ILCA (International Livestock Centre for Africa and International Laboratory for Research on Animal disease). Supplies, T.A. and training. Date financial decision July 84. 5th EDF.

## TANZANIA AND SADCC

**Regional Rinderpest Control Programme.** Resp. Auth.: Ministry of Livestock-Veterinary Services Department. 4.3 mECU. Purchase of 27 four-wheel drive vehicles, 30 lorries (7 ton), vaccines, veterinary and laboratory equipment, camping equipment, T.A. Date financial decision May 84. 5th EDF.

## 28 AFRICAN COUNTRIES

**Pan-African campaign against Rinderpest.** Resp. Auth.: OUA and IBAR. Estimated total cost for 1st year 53 mECU. Supply of equipment and T.A. Project on appraisal. 5th EDF.

## SWAZILAND — LESOTHO

**Matsapha Airport.** Construction of a control tower, equipment and T.A. Estimated total cost: 31 mECU. EDF 2.1 mECU. Int. tender foreseen in 84. EDF part: date foreseen for financial decision 2nd half 84. Project in execution. 5th EDF.

## BOTSWANA — LESOTHO — MALAWI — SWAZILAND

**Multi-country post-telecommunication training scheme.** Resp. Auth.: Postmaster general of 4 countries. 1.2 mECU. Training and supply of equipment. T.A. managed by I.T.U. Supplies: int. tender. Date financial decision July 84. 5th EDF.

## MEMBER COUNTRIES OF CARICOM

**Development of the regional trade promotion services in the Caribbean region.** Resp. Auth.: Caricom Secretariat. 1.8 mECU. T.A. project. Contract: short-list already drawn up. 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. T.A.: Short-list already drawn up. 5th EDF.

**Regional hotel trade school in St Lucia.** Resp. Auth.: Caricom Secretariat. Estimated total cost 0.9 mECU. EDF 0.2 mECU. Work financed locally. EDF part: supply of pedagogical equipment, furniture and 1 vehicle. Project on appraisal. 5th EDF.

**Regional marketing of agricultural inputs.** Resp. Auth.: Caribbean Food Corporation. (CFC). 2.3 mECU. Supply of fertilizers and seeds. Works and equipments. Supplies: int. tender in '84. Project in execution. T.A.: Short-list already drawn up. 5th EDF.

**Research development in the Caribbean region. (CTRC).** Resp. Auth.: Caricom Secretariat 4.1 mECU. T.A. marketing and tourism promotion. Project in execution. Training: U.W.I. (Jamaica). 5th EDF.

**Regional tourism promotion study.** Resp. Auth.: Caricom Secretariat. Caribbean Tourist Association. 0.8 mECU. Steigenberger Consulting (D). Project in execution. 5th EDF.

**Assistance for Point-Salines International Airport-Grenada.** Resp. Auth.: Caricom Secretariat and Grenada Int. Airport Authority. EDF part 1.74 mECU, T.A. and supply of radio and electronic navigational equipment. T.A. by direct agreement. Equipment by int. tender. Date foreseen for financial decision 2nd half '84. 5th EDF.

**University of the West Indies.** Resp. Auth.: Caricom Secretariat and Ministries of the member countries of CARICOM. Works, supply of pedagogical equipment, training and T.A. 10.437 mECU. Date financial decision January 84. 5th EDF.

## MEDITERRANEAN COUNTRIES

### ALGERIA

**Training of technicians for rural development and hydraulics.** Resp. Auth.: Ministère de l'Agriculture. 1.440 mECU. T.A. and training: For T.A.: X-TRA (B), AAB (D), AGROTEC (I) SATEC (F). Project in execution.

### 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. Short-list already drawn up. Project in execution.

**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 warehouses on prefabricated steel of 1 700 m<sup>2</sup> each providing a total capacity of 27 000 T. Works: int. tender foreseen in 2nd half '84.

**Egyptian Renewable Energy Development Organization. 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 '84. T.A.: GET/KFA (D).

**Feasibility study for Thermal Power Station at Kureimat.** Resp. Auth.: Egyptian Electricity Authority. Study for a 1200 MW thermal power station. Estimated cost 2 mECU. Date financial decision July 84.

**University Cooperation.** Resp. Auth.: Academy of Sciences, Cairo University and Suez Canal University. Estimated cost 4.7 mECU. Cooperation with Liverpool University in the field of Marine biology, with Gent University for artemia cultivation and with Netherlands Kanker Instituut for cancer therapy. Date financial decision July 84.

**Export Promotion.** Resp. Auth.: Egypt Export Promotion Company (EEPC). T.A. to the EEPC. 0.92 mECU. Project on appraisal.

**Sinai Water Resources Study.** Resp. Auth.: Water Resources Centre (WRC). 3 mECU. Soil prospection and investigations. Project on appraisal.

★ **Kom-Ombo Soil Improvement Study.** Resp. Auth.: EALIP. Estimated cost 2 mECU. Project on appraisal.

### JORDAN

**2 Trade Training Centres (TTC).** Resp. Auth.: National Planning Council (NPC) and Vocational Training Corporation. Cost estimate 1.2 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 February '82. Project in execution. Int. tender for Amman launched in August 84.

**Secondary Industrial School at Madaba.** Resp. Auth.: Ministry of Education (M.O.E.) EEC part 1.6 mECU. Supply of pedagogical equipment and T.A. Supplies by int. tender launched in July 84. Date foreseen for financial decision 2nd half 84. T.A.: Short-list already drawn up.

### 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 ±50% of total cost of the project. Project on appraisal.

**Aid for the Union Nationale de Crédit Coopératif (UNCC).** 1.4 mECU. Line of credit to the UNCC and T.A. T.A.: Short-list already drawn up.

**Document automatization for the Chambre de Commerce et de l'Industrie de Beyrouth (CCIB).** Resp. Auth.: C.C.I.B.

0.24 mECU. Supply and T.A. For equipment int. tender in '84. T.A.: M. Savitsky (F).

### MOROCCO

**Interventions for Laboratoire de Technologie des céréales 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 already drawn up.

**Reabsorption of Salé "bidonville".** Resp. Auth.: Ministère de l'Habitat. Estimated total cost 30.6 mECU. EEC part 18 mECU, local 15.5 mECU. Water, roofs infrastructure, sanitation, electricity, sewage works. Int. tender launched in March 84. Project in execution.

### TUNISIA

**Participation in creating 3 Training Vocational Centres: in Nabeul, Menzel-Bourguiba, Zaghuan.** Resp. Auth.: O.T.T.E.E.F.P. (Office des Travailleurs Tunisiens à l'Etranger de l'Emploi et de la Formation Professionnelle.) EEC Contribution 3.87 mECU. Supply of equipment, T.A. and training. Supplies: int. tender for Nabeul foreseen in 2nd half '84. T.A.: A.A.B. (D).

★ **Purchase of 10 ocean trawlers.** Resp. Auth.: Banque Nationale de Dév. Agricole (BND). Estimated total cost 8.5 mECU. EEC 2.25 mECU, EIB 4.55 mECU, Local 1.7 mECU. Project on appraisal.

### SYRIA

**ISSAT. Institut Supérieur des Sciences Appliquées et de Technologie.** Resp. Auth.: State Planning Commission. Estimated total cost 22.2 mECU. EEC part: supply of teaching and training equipment for the institute. Project on appraisal.

## Non-associated developing countries

### ANGOLA

**Repatriates project.** Cofinanced with UNICEF. 2 mECU. Date financial decision April '84.

### MOZAMBIQUE

**Potato seed production project.** Resp. Auth.: Ministry of Agriculture. 7.1 mECU. Works, supplies, equipments, training and T.A. Supplies: int. tender. Project in execution. Technical study: K.W.S. (D).

### BANGLADESH

**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, 2nd half '84.

**Building of storage for fertilizers.** Resp. Auth.: Bangladesh Agricultural Development Corporation (BADCO). Cofinancing: EEC and Netherlands. Total cost 4 mECU. EEC 2 mECU Netherlands 2 mECU. EEC part:

Works by int. tender. Netherlands part: buildings and T.A.

**Bhola irrigation project.** Resp. Auth.: Bangladesh Water Development Board (BWDB). Estimated total cost 44.4 mECU. EEC 3 mECU. Parallel cofunding with A.D.B. (Asian Dev. Bank). Works, equipment and supply of vehicles, pumps and fuel. T.A. and training. Project in execution.

**Food grain production and storage.** Resp. Auth.: BADC. 7 mECU. Purchase of phosphate fertilizers (TSP) by int. tender launched in June 84. Date financial decision December '83. Special programme hunger.

**Improvement of Grain Storage.** Resp. Auth.: Ministry of Food. 7 mECU. Works by direct labour or acc. tender. T.A. and training by direct agreement. Date financial decision April 84.

**Cereal Seeds II.** Resp. Auth.: BADC. 17 mECU. EEC 10 mECU. Germany 7 mECU. Works, supplies, storages, T.A. Date financial decision June 84.

## BHUTAN

**Plant protection services.** Resp. Auth.: Ministry of Development (Agricultural Department). 3.4 mECU. Building of laboratories, equipments training and T.A. Works: acc. tender. Supplies: int. tender or direct agreement. Project in execution.

## CHINA (PEOPLE'S REP.)

★ **Fruit Cultivating and Preservation Techniques.** Estimated total cost 4.350 mECU. EEC 1.650 mECU. Cofinancing with Italy. T.A. and transfer of technology. Project on appraisal. Date foreseen for financial decision October 84.

★ **Flood forecasting and management of Beijiang River.** Estimated total cost 5.5 mECU. EEC 1.7 mECU T.A. and transfer of technology. Project on appraisal. Date foreseen for financing decision October 84.

## BURMA

**Palm oil development.** Resp. Auth.: Ministry of Agriculture and Forest. Estimated cost: 16.3 mECU. Financing: EEC 4.9 mECU. Switzerland and local 11.4 mECU. Expanding production for domestic consumption. Supplies and T.A. Supply: int. tender in 84. I.R.H.O. (F).

**Rural water supply and sanitation outside the dry zone.** Resp. Auth.: Ministry of Agriculture and Forests and Ministry of Health. Estimated total cost 11.5 mECU. EEC part 2.5 mECU. Germany and Canada via Unicef 1.68 mECU and 0.85 mECU. Local 6.47 mECU. Works and supply of equipment for wells. Works by direct labour supplies by int. tender and direct agreement. Project in execution.

## INDONESIA

**Baturraden Dairy Development.** Resp. Auth.: D.G. for livestock services. Estimated cost: 8.385 mECU. EEC 4.4 mECU, Italy 0.41 mECU. Construction, infrastructure, supply of equipment, T.A. Works and supplies: int. tender 2nd half '84. T.A.: IFA-GRARIA (I).

**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.

**T.A. to Bank Indonesia for SEDP II.** Resp. Auth.: Bank Indonesia. Total estimated cost 12.5 mECU. EEC 8.3 mECU. Local 4.2 mECU. Expatriates and local consultants. T.A. and training in Bank Indonesia regional offices to implement Bank's large ongoing programme of small-scale credits. Consultants will be contracted by Bank Indonesia, after approval by the Commission, on the basis of tender or mutual agreement procedures. Project in execution.

**Pilot Project for Artisanal Fisheries in East Java.** Resp. Auth.: Directorate General of Fisheries (DGF). Total cost 4.88 mECU. Parallel cofinancing with Italy. EEC 3.178 mECU. Italy 0.876 mECU, Local 0.826 mECU. Works, equipment and supplies. Works by direct labour. Supplies: int. tender and direct agreement. Supply of refrigeration equipment: Italy. T.A.: direct agreement. Project in execution.

**Madura groundwater development.** Resp. Auth.: Ministry of Public Works. DG for Water Resources Dev. Total cost 19.3 mECU. EEC part 13.10 mECU, U.K. 2 mECU, Local 4.2 mECU. EEC part: supply of pumps, drilling equipment, vehicles, casing and screening and local T.A. U.K. part: expatriate T.A. Supplies: int. tender.

**West Pasaman Irrigation Project.** Resp. Auth.: Ministry of Public Works. DG for Water Resources Dev. 7.5 mECU. Project in execution.

## INDIA

**Pilot project for village trout fish farming in Jammu and Kashmir.** Resp. Auth.: Department of Fisheries of Jammu and Kashmir. EEC 1 mECU. Local 0.37 mECU. Works, equipment, T.A. and training. Works by direct labour or acc. tender. Supplies: restr. tender with specialized companies. T.A.: direct agreement after short-list. Project in execution.

**State Centres for training for rural Development.** Resp. Auth.: Ministry of Rural Development (MRD). Construction improvements and supply of equipment for centres in 22 states. EEC part 6.5 mECU. Works and supplies by acc. tenders. Project in execution.

**Modernization of tank irrigation systems in Tamil Nadu.** Resp. Auth.: Public Works Department (P.W.D.) and Agricultural Department of the State government of Tamil Nadu. EEC part 25 mECU. Works by direct labour or acc. tenders. Supplies by acc. tenders. Project in execution.

**Supply of fertilizers.** Resp. Auth.: Minerals and Metal Trading Corporation of India (MMTC). Purchase of 230 000t of urea by int. tender launched in May 84. 32.750 mECU. Date financial decision June 84.

## PAKISTAN

**Karachi fishing port.** Resp. Auth.: Fishery department of the Sind Province. Estimated cost 12 mECU. New facilities: quay, boat repair yard, fish-shed, dredging. Rehabilitation of existing facilities, equipments and TA. TA: int. tender after prequalification. Works and supplies in 84.

**Baluchistan Water Supply Programme, phase II.** Resp. Auth.: Baluchistan Integrated Area Development Programme (BIAD). Estimated total cost 13.20 mECU. EEC 7.80 mECU. UNICEF 1.88 mECU. Local 3.52 mECU. EEC part: civil works, materials, vehicles and training. UNICEF will manage EEC contribution. Supplies for EEC part by int. tender. Contracts by direct agreements. Project in execution.

## NEPAL

**Rural water supply and health infrastructure.** Resp. Auth.: MPLD (Ministry of Panchayat and Local Development) and DWSS (Department of water supply and sewage). 4.8 mECU. EEC 3.7 mECU Local 1.1 mECU. Supply of equipment (pipes, tubes, manual-pumps, vehicles) and T.A. Management by UNICEF for EEC contribution. Supplies: int. tender or direct agreement. Date foreseen for financial decision 2nd half 84.

**Forestry development.** Resp. Auth.: Ministry of Forest and Soil Conservation. Estimated total cost 33 mECU. EEC part 2.8 mECU (+5.3 mECU counterpart funds arising from the supply of fertilizers). I.D.A. 18.389 mECU, UK (O.D.A.) 0.385 mECU. Local 6.126 mECU. Reafforestation and seed units. Construction of 2 training centres, supply of vehicles and equipments training and T.A. Buildings and vehicles: int. tender. EEC: T.A. for reafforestation and a part of the local expenditures. Date financial decision December '83. Special programme hunger.

★ **Nepal Administrative Staff College.** NASC. Resp. Auth. NASC Secretariat. Estimated total cost 6.5 mECU. EEC 5 mECU, U.K. 1.5 mECU. Renovation and construction works, supply of equipment T.A. and training. Project on appraisal. Date foreseen for financial decision October 84.

## THAILAND

**Rubber smallholdings yield improvement.** Resp. Auth.: Rubber Research Centre (RCC). Ministry of Agriculture and Cooperatives. 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). Tenders in '84.

**Oilseed crop development programme.** Resp. Auth.: Ministry of Agriculture — Oilseed Project Steering Committee. Total estimated cost 4.2 mECU. EEC 3.3 mECU. T.A. and supply of equipment. T.A.: Short-list not yet drawn up.

**Agricultural credit project.** Resp. Auth.: Bank for Agriculture and Agricultural Cooperatives (BAAC). Estimated total cost 125 mECU. EEC 20 mECU, As. Dev. Bank (ADB) ± 59 mECU, BAAC 46 mECU. Purchase of equipment, fertilizers, training and T.A. Supplies by int. tender, T.A. by direct agreement via EEC. Project in execution.

**Cashew development, NE.** Resp. Auth.: Ministry of Agriculture. EEC 1.3 mECU, local 0.620 mECU. Works, equipment and T.A. Date financial decision May 84.

## THE PHILIPPINES

**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.

#### MALDIVES

**Water supply and Sanitation at Male.** Resp. Auth.: Maldives Water supply Agency (M.W.S.A.). Cofinanced with Saudi Fund and Germany. EEC part 1.79 mECU. Date financial decision June 84.

#### SRI LANKA

**Integrated Rural Development of System B (Zones 2 and 3) of the Accelerated Mahaweli Development Programme.** Resp. Auth.: Mahaweli Authority of Sri Lanka. Estimated total cost 73 mECU. EEC participation 20 mECU, Saudi Fund 29 mECU, Local 24 mECU. Roads, tertiary irrigation, social and administrative infrastructure, land development, training and T.A. Supply of equipment and vehicles by int. tender. Works by acc. tender. T.A. and training by direct agreement. Project in execution.

#### ASEAN

**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.

**Asean Timber Technology Centre (ATTC).** ATTC Secretariat. EEC 7.5 mECU for works, supply of equipment, T.A. and research programme. T.A. by direct agreement. Date financial decision July 84.

#### LAOS

**Water Supply.** Cofinanced with UNICEF. Estimated cost 1.2 mECU. Project on appraisal. Date foreseen for financial decision September '84.

#### DOMINICAN REPUBLIC

**T.A. for agrarian reform and integrated rural development.** Resp. Auth.: Instituto Agrario Dominicano (I.A.D.). Total cost 13.6 mECU, EEC 12 mECU, Local 1.6 mECU. Infrastructure, equipments, T.A. and training. Supplies: int. tender or acc. tender or direct agreement. Works: direct labour or acc. tender. T.A.: short-list already drawn up. Project in execution.

#### 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 '84.

**Integrated rural development of Jeremy region.** Resp. Auth.: Présidence de la République. Total cost 7.4 mECU, EEC 6.6 mECU, Local 0.8 mECU. T.A. works, equip-

ments and training. T.A.: contracts made by the Commission after government agreement. Supplies: int. tender. Works: direct labour. Project in execution.

**Hydraulic support programme for the "mornes" and soil conservation.** Resp. Auth.: Ministère de l'Agriculture. Micro-projects, training and T.A. Cofinanced with France. 2.23 mECU. Local 0.2 mECU. Supplies: int. tender or direct agreement. T.A.: direct agreement. Date financial decision December '83. Special programme hunger.

#### NICARAGUA

**T.A. for agrarian reform and integrated rural development.** Resp. Auth.: Ministerio de la Agricultura e de la Reforma Agraria (MIDINRA). Total cost 12 mECU. EEC 9.8 mECU. Local 2.2 mECU. Infrastructure, equipments and T.A. Equipments: int. tender. T.A.: short-list already drawn up. Project in execution. Int. tender for motorcycles launched in February 84.

**Waslala regional development.** Resp. Auth.: MIDINRA. Total cost 8.5 mECU. EEC 3.5 mECU. Local 5 mECU. Road infrastructure and social. Supply of agricultural equipment. T.A. Roads by direct labour. Supplies: launched in March 84. T.A.: AGRER (B). Works: direct labour or acc. tender. Project in execution. Int. tender for motorcycles launched in February 84.

**Crop development.** Resp. Auth.: Ministerio de la Agricultura e de la Reforma Agraria (MIDINRA). Total estimated cost 19.930 mECU. EEC 7.4 mECU. Studies, monitoring, training, supply of equipment and T.A. Supply: int. tender or acc. tender according to importance or urgency. Contract: CONSULINT (I). Project in execution.

#### NICARAGUA - HONDURAS

**Bridges reconstruction.** Resp. Auth.: Ministry of Public Works. 3.2 mECU. Reconstruction of 3 bridges. Works, T.A. and site supervision. Date foreseen for financial decision 2nd half 84.

#### 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.

**Rural microprojects.** Resp. Auth.: Corporation de Développement de Potosi (CORDEPO) and Corporation de Développement d'Oruro (CORDEOR). Total cost 18 mECU. EEC 16 mECU. Drinking water supply, roads, lines of credit, T.A., training. Works by direct labour or acc. tender. Supplies: int. tender launched in March 84. T.A.: direct agreement by CCE. Project in execution.

**Reconstruction programme.** Resp. Auth.: Servicio Nacional de Caminos (SNC) for the bridge. "Corporacion Regional de Desarrollo del Beni (CORDEBENI) for flood control. Servicio Nacional de Meteorologia e Hidrologia (SENAMHI) for prevention and PHICAB programme. EEC contribution 3.4 mECU. Works and supplies. appraisal. Date financial decision July 84.

#### HONDURAS

**T.A. for agrarian reform and integrated rural development.** Resp. Auth.: Instituto Nacional Agrario (I.N.A.). Total cost 17.7 mECU. EEC 16.9 mECU. Local 0.8 mECU. Infrastructure, supplies, equipments and T.A. Works by direct labour or acc. tender. Supplies: int. tender or acc. tender or direct agreement. T.A.: BOOM (NL). Project in execution. Int. tender for vehicles launched in January 84.

**Consolidation of the agrarian reform.** Resp. Auth.: I.N.A. Estimated cost 9 mECU. Project in execution.

#### MEMBER COUNTRIES 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.

**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.

**Applied agricultural research (maize and corn).** Resp. Auth.: CIMMYT (Centro Internacional de Mejoramiento Maiz y Trigo) Mexico - Decentralized actions in the andean region. Research and training. 2 mECU. Project in execution.

**Regional project for industrial timber promotion.** Resp. Auth.: Junta del Acuerdo de Cartagena. Total cost 12.610 mECU. EEC 6 mECU. Industrial promotion, vocational training, rural buildings and housing. T.A.-Works: direct labour or acc. tender. Supplies: int. tender or acc. tender or direct agreement. T.A.: choice by the JUNAC on the basis of short-list proposed by CCE. Project in execution.

**Regional programme for technical cooperation: food strategy.** Resp. Auth.: JUNAC. EEC contribution 7 mECU for European T.A. and supply of data-computerized equipment by int. tender. al. Date financial decision July 84.

#### COSTA RICA - HONDURAS - NICARAGUA - PANAMA - DOMINICAN REPUBLIC

**Latin American qualified nationals reinstatement in 5 Central American countries.** Resp. Auth.: CIM (Comité Intergovernmental pour les migrations). 1.4 mECU. Reinstatement of 75 qualified nationals via CIM. Date foreseen for financial decision 2nd half 84.

#### COSTA RICA

**T.A. for agrarian reform and integrated rural development.** Resp. Auth.: Ministerio de la Agricultura. Total cost 25.8 mECU. EEC 18 mECU. Local 7.8 mECU. Infrastructure, equipment and T.A. Works by direct labour or acc. tender. Supplies: int. tender or acc. tender or direct agreement. T.A.: SCET-AGRI (F). Project in execution.

## PERU

**Pilot project Majes. Irrigation.** Resp. Auth.: Autoridad Autonoma del Proyecto MAJES (Autodema). Total cost 17 mECU. EEC 5.6 mECU, Italy 2 mECU, Local 9.4 mECU. Supply of equipment and inputs, T.A. and credit system. Project in execution.

**Rural investments programme. (Micro-regions in Cusco).** Resp. Auth.: Corporacion Departamental de Desarrollo de Cuzco (CORDECUZCO) and (PRODERM) Proyecto de Desarrollo Rural en Microregiones. EEC part 6 mECU. Works and supply of equipment for forestry, natural resources, infrastructures, monitoring and research. Works by direct labour or acc. tenders. Supplies by int. tenders or acc. tenders. Project in execution.

## YEMEN ARAB REPUBLIC (YAR)

**Seed production project.** Resp. Auth.: central Agricultural Research Station (CARS). Total cost 6.6 mECU. EEC 5.2 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.: K.W.S. (D).

**Dhamar Rehabilitation Project.** Resp. Auth.: The Executive office for Reconstruction. EEC part 2.55 mECU. Supply of equipment and T.A. to support the self help house reconstruction effort after the earthquake of December 82. Project in execution.

**Al Bayda integrated rural development.** Resp. Auth.: Ministry of Agriculture and Rada integrated Rural Development Project Organization. EEC part 2.74 mECU. Improvement of crop and livestock production,

road infrastructure and drinking water supplies. T.A. All by direct labour. T.A. by direct agreement. Project in execution.

## AFRICAN - LATIN AMERICAN AND ASIAN COUNTRIES

**Fuel wood.** Resp. Auth.: Commission of the European Communities. 2.7 mECU. a) Information and dissemination of knowledge. Seminars in Asia. b) Research and Development programme in Asia-Kenya: euphorbia. c) Technical support for national strategies, Niger, Rwanda, Burundi, Haiti and SADC members. d) Nepal pilot scheme. Studies, T.A. Laboratory facilities, supplies. Studies and T.A. by direct agreements. Laboratories: AIT (Asian Institute of Technology in Bangkok) and CRA (Centre de Recherche Agronomique de Gembloux. Station de Technologie Forestiere - B). Supplies: int. tender. Date financial decision December '83. Special programme hunger.

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Bohdan HAWRYLYSHYN — *Les itinéraires du futur — Vers des sociétés plus efficaces* (Itineraries of the future — towards more efficient societies) — PUF, 108 bvd St-Germain, 75006, Paris, France — FF 125 — 239 pages — 1983

Rivalry between nations, the world economic map and the balance of power between the different states change with disquieting speed. Who will win?

This book provides one or two answers by looking at the factors that determine the economic, political and social efficiency of nations. The original thing is that it does so with an analysis of the interaction between the components of each order — i.e. its values, its political system and its economic system.

The author looks at certain key countries, tracing the changes that have to be made to their values and their economic and social systems if they are to safeguard or improve their efficiency and, therefore, facilitate any construction of a new international order.

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Philippe CHALMIN — *Négociants et chargeurs — La saga du négoce international des matières premières* (Dealers and shippers — The saga of the international raw materials business) — Economica, 29, rue Héricart, 75015, Paris, France — FF 98 — 287 pages — 1983

International companies are particularly common in the field of raw materials (the English-speaking world calls them commodities, they cover products at varying stages of processing and they make up the bulk of world trade). This is the framework of the investigation which Philippe Chalmin undertakes after outlining the main trends in the international raw material trade.

Part II discusses the functioning of a society based on business. Practical examples are a basis for showing the different commercial, financial, logistical and legal aspects of the everyday running of these firms, for looking at the risks involved and examining the highly ambivalent relations between the dealer and the speculator.

Part II is mainly descriptive in nat-

ure. It introduces the major dealers in the environment of their products from grain to oil, and then attempt a typology of firms according to type of operation and historical and geographical origins.

All this will perhaps enable us to answer the question that is at the heart of all these discussions — what is the real influence of these firms on international trade, in raw materials in particular, and is there no way of establishing some control over their activity? This is the problem that some of the medieval monarchs faced with the power of the first merchant capitalists.

The general trend over the past 20 years has been extreme concentration on one or two firms dealing in a whole range of products. New arrivals, usually capitalizing on new markets, have been rare. But as things stand, the dynamism of these firms exceeds the narrow bounds of the raw material trade in two areas:

- advanced industrialization in processing, gradually leading to a change in the firm whereby it becomes one of the most dynamic in the field;
- enlargement of the international finance sector, going as far as the creation of vast conglomerates providing (commercial, logistical, financial etc) services for international trade.

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Overseas Development Administration (ODA) — *The Evaluation of Aid Projects and Programmes* — Editor: B.E. Cracknell, ODA, Eland House, Stag Place, London SW1E 5DH — 149 pages — £ 5.95 — 1984

How are the aid projects funded by the ODA, Britain's ministry for overseas development, assessed? What procedures are followed and what

problems encountered? What are some of the lessons to be learned and are they, in practice, being learned?

These were some of the questions raised at the ODA Conference on Evaluation held at the Institute of Development Studies at the University of Sussex in April 1983, the proceedings of which form the basis of this book.

In his foreword, Britain's Minister for Overseas Development, Mr Timothy Raison, stresses that, with over £ 1 100 million being spent annually under Britain's official aid programme, the continual search for ways of improving the effectiveness of its impact was vital. Evaluation of aid projects and programmes, he emphasizes, has a significant role to play in bringing about any improvement by enabling lessons to be learned from experience and making it possible for past mistakes to be avoided when new projects are designed. Only in this way, Mr Raison says, can developing countries and donors alike be satisfied that the assistance being given is achieving, to the greatest degree possible, the objectives pursued.

While concentrating principally on ODA's own experience of aid evaluation, the book also examines a number of other donors' experiences of reviewing aid performance against objectives, including those of the World Bank and of USAID.

In addition to general conclusions and proposals for follow-up action to the conference, the book concludes with a paper delivered by Mr R.J. Berg, Senior Fellow of the Overseas Development Council, Washington, entitled "Quo Vadis? A visionary look at where evaluation is heading in the years ahead".

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