

12009

the courier

EUROPEAN COMMUNITY — AFRICA-CARIBBEAN-PACIFIC

Published every two months

No 51 — SEPTEMBER-OCTOBER 1978

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ENERGY IN THE
ACP STATES

THE EUROPEAN COMMUNITY

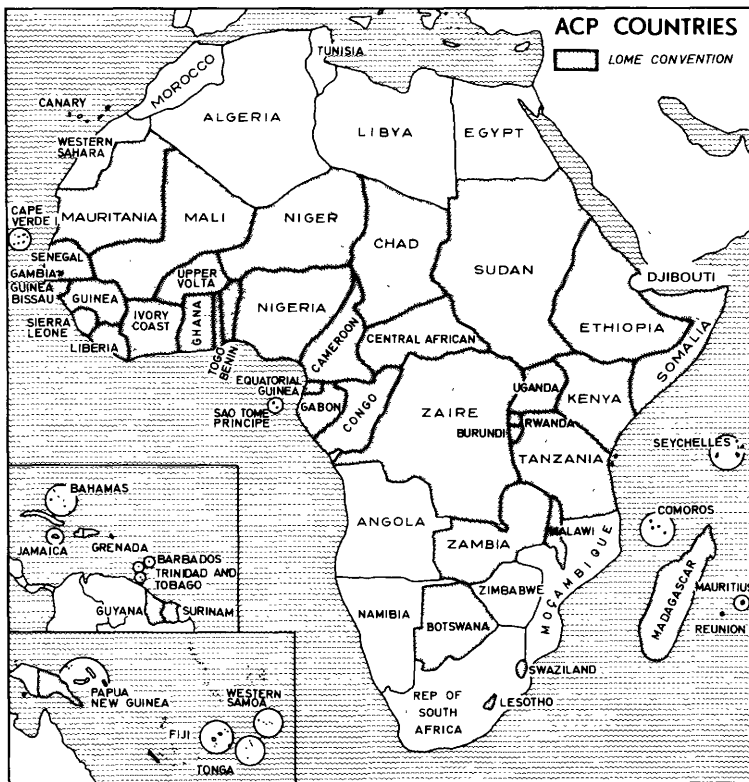
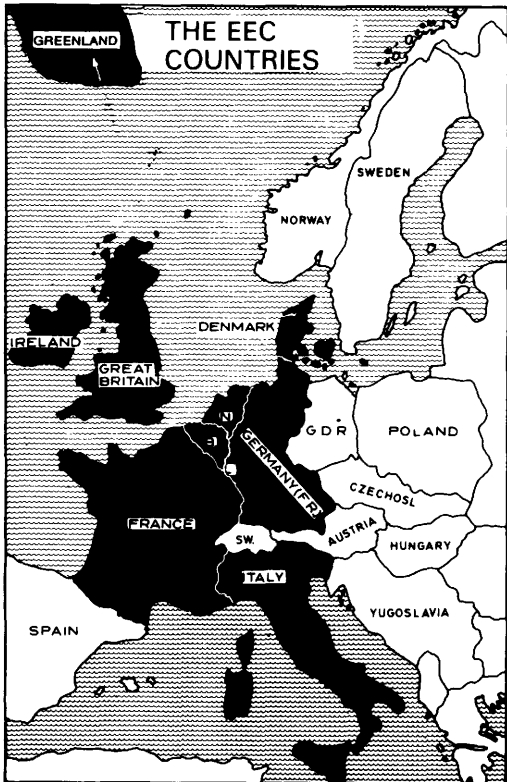
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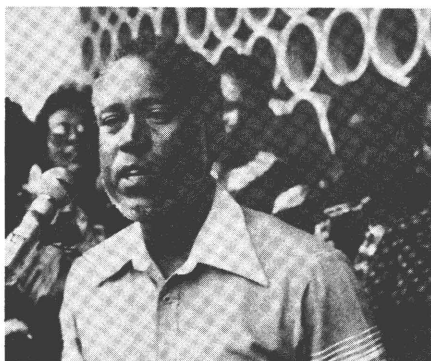
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Guinea-Bissau. After a 12-year fight for liberation, Guinea-Bissau is one of several African states where economic difficulties have allowed no respite since independence. President Luiz Cabral gives the *Courier* an idea of the work that has to be done, as drought clamps down on the economic development of his country. EEC aid is proving a valuable help.

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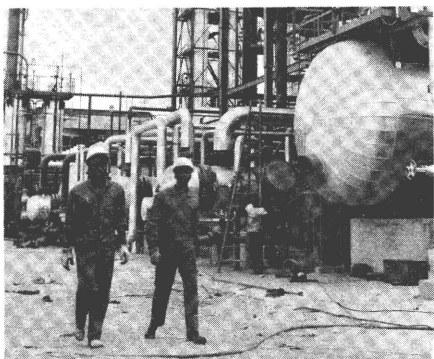


Guyana. A prosperous and expanding agricultural sector, growth industries in sugar, bauxite and timber—and a heavy balance of payments deficit. The continual deterioration in the terms of trade is the reason for Guyana's unbalanced economy. The government is working hard to straighten it out by cutting back in luxury imports and developing national resources. Premier Forbes Burnham describes domestic and foreign economic policy.

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Guinea. Independent since 1958, Guinea is the only francophone African country in the Lomé Convention which did not previously belong to the Yaoundé Convention. EEC development commissioner Claude Cheysson made an official visit to Conakry in July to discuss EEC-Guinea and EEC-ACP cooperation with President Sékou Touré. We report on the visit and publish a speech by President Sékou Touré on human rights, an issue raised by the new EEC-ACP convention.

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Dossier. Five years after the 1973-74 oil crisis it is clear not only that the age of cheap energy is over but also that the real energy crisis is only beginning, at a time when the developing countries need energy increasingly for their economic progress. Our dossier on the problem of energy in the development of the Third World, and the ACP countries in particular, examines the present situation, the opinions for the future and EEC-ACP cooperation in this fundamental area.

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Developing World. Locusts are swarming back into Africa. In East Africa thousands of acres of food crops have been stripped bare in the last few months, and the Sahel, where food is already desperately short, is threatened. FAO desert locust control experts are mounting a wide-ranging campaign against some 50 separate swarms that are causing havoc to farmers in the Horn of Africa and the Gulf of Aden.

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THE COURIER

EUROPEAN COMMUNITY —
AFRICA - CARIBBEAN - PACIFIC

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Energy and development

by Claude CHEYSSON

The age of cheap energy is over, before most of the people of the world have been able to benefit from it. The 1973-74 oil price rises—the “energy crisis”—were only the start of what is likely to become a general trend as the supply situation gets tighter. The real energy crisis is yet to come.

Some people, among the world's poorest, have faced another form of energy crisis for a long time. The daily search for firewood and the high prices it fetches in the arid developing countries are a constantly increasing burden on them. Each person in the non-oil producing developing countries buys an average of 0.3 tons of oil equivalent a year and burns another 0.2 tons in the form of traditional fuels such as charcoal. It is a tiny amount compared to the annual consumption of the average North American (8.2 tons) or European (3.4 tons). But even a mere doubling of energy consumption by the developing countries will increase world energy consumption by 4-500% by the end of the century, according to recent estimates. And half the world's population lives in the non-oil producing developing countries.

Both industrialized and developing countries will suffer from the scramble for energy if alternatives are not found to the present pattern of production and consumption. The industrialized countries can try and cut back in the medium term, but they are increasingly aware that their own economic stagnation since the oil crisis can only be reversed durably if there is increased external demand, particularly from the developing countries, which should be one of the most dynamic factors of future economic growth. Raising real incomes in the developing countries involves raising their energy consumption. As for the poor countries, the soaring cost of energy has dealt a crippling blow to their development plans. They are hit both by the cost of the oil they import and by the higher prices of manufactured goods, raised to meet the industrial countries' oil bills.

So increased cooperation between developing and industrialized countries in the field of energy is an evident priority. That is why the European Commission is putting forward a

comprehensive set of guidelines to aid developing countries in this field, combining the experience of its departments for cooperation, energy, external relations and science and research. The objective is to help developing countries to attain as great a degree of self-sufficiency in meeting their energy requirements as is possible and consistent with their overall development priorities.

A systematic programme of energy cooperation with developing countries should have a preparatory phase, including an inventory of present and potential energy resources and future requirements, and an operational phase which might cover prospection, research and development in the countries concerned, training and industrial cooperation as well as the execution of priority projects at both national and regional levels.

Of particular interest is the possibility of developing new and renewable sources of power, such as solar energy, although conventional energy will continue to be of the first importance. Now that the price of oil has brought alternative power sources much closer to economic competitiveness, quite apart from reminding the world that its present reliance on fossil fuels cannot continue indefinitely, developing countries could take the lead in implementing the new kinds of energy.

Through its particular experience of development cooperation and the wide-ranging institutional, financial and technical instruments brought into effect by the Lomé Convention, the Community is well placed to undertake this new initiative. The negotiations which have just opened on a successor to the Convention offer a timely forum for consolidating and exploring ACP-EEC cooperation in this vital field as in others. The Community will also continue to participate in wider international operations to help developing countries face the energy crisis.

The “Dossier” looks at the energy situation, particularly in the ACP countries, and outlines the new perspectives opened by the oil crisis as a background to ACP-EEC cooperation in this fundamental sector. □

C.C.

Edouard Saouma, Director-General of the UN Food and Agricultural Organization

“The first human right is the right to food”

As long as people are dying of hunger, there can be no economic, social, political or even simply human progress for them. “But the scandal of famine is still with us”, says Edouard Saouma, head of the UN Food and Agricultural Organization. He feels that providing a proper diet for everyone “meets the first of human rights and satisfies man’s first basic need.”

The end of the second development decade is in sight, but agriculture, in spite of being the priority sector of this decade, has not developed as anticipated. Mr Saouma, from the Lebanon, took over as head

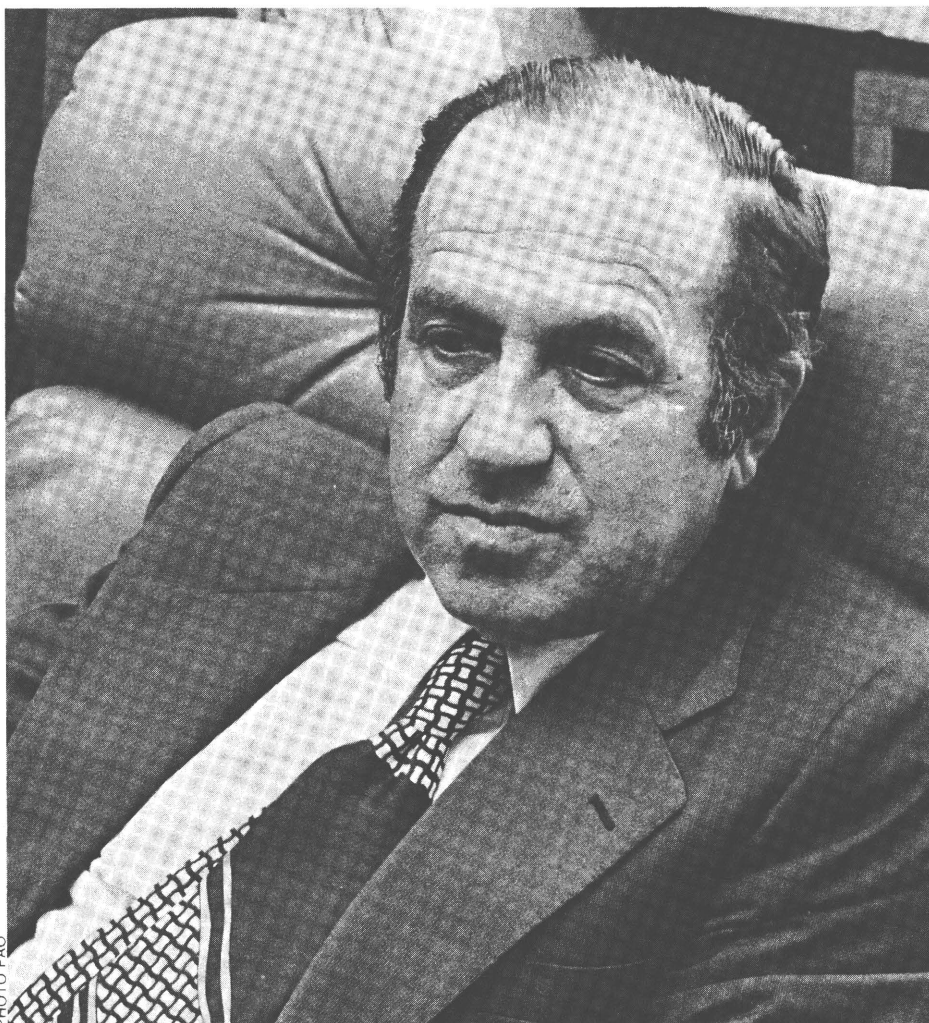
of the FAO in January 1976 from Addeke Boerma, who left on a pessimistic note (see *Courier* n° 35, pp. 28-31). He is concerned about the way the world food situation is developing but has nevertheless decided to mobilize resources and encourage policies that will not just bridge the rich/poor gap but realize the hopes that all FAO heads have had of setting up a world food safety net, based on adequate, properly distributed, national and international reserves. In this interview, Mr Saouma explains his policy, his way of leading the FAO and his plans.

Making the FAO more operational

► *There was unanimity on your appointment as successor to Mr Boerma. Has this helped you make your own changes to the FAO and, if so, what are the main reforms you have introduced?*

— There is no doubt that being elected more or less unanimously was a help when it came to gaining acceptance for the reforms I announced six months after the election. But I had in any case decided to do as I thought fit and I am sure that my policy would have been approved even without the help of the unanimous vote, since the reforms are clearly in line with the aims and needs of a development policy geared to what all member countries, whatever their outlook, see as the demands of both today and tomorrow.

Briefly, I have declared war on paternalism and on the ivory tower mentality which mainly consists of increasing the number of bureaucrats, publications and meetings at our headquarters in Rome. My aim is to concentrate more on practical achievements rather than theory and to establish cooperation rather than provide assistance. I really had to streamline and cut out a large number of the jobs, documents and meetings originally planned for 1976/77 so as to release resources to spend on effective, rapid, direct action in the field.



Edouard Saouma is the FAO's sixth director-general: his approach has been to bring it down from its "ivory tower"

Many innovations have been made and they will inevitably have a direct effect on food production at national level. Examples of this are the decentralization, which brings the FAO closer to its member countries, and the launching of a special programme to prevent food losses. Financing for this programme originally came from savings on the ordinary budget and this enabled extra-budgetary funds to be obtained later on.

To conclude then, greater attention is now being paid to the practical schemes which the FAO needs to run to help solve the acutest problems in the fields of food production, dependable supplies, food aid and rural development.

Greater priority to agricultural development

► *Has agriculture been given enough priority over the first two*

development decades. And how should rural development figure in the third decade?

— First of all, a distinction has to be made between what the great strategies are and what the governments actually do. There were no detailed plans nor clear priorities during the first decade and it was only for the second that the UN General Assembly adopted an international development strategy, in the preparation of which the FAO's World Indicative Plan played a major part. The strategy included the fundamental aim of increasing the growth of agricultural production in all developing countries at the rate of 4 % p.a., so considerable priority in fact went to agriculture. But in spite of this, progress in the agricultural sector in the '70s has been slower than in the previous decade. The governments do not appear to have given enough priority to agriculture in their investment or other policies.

After the problems of the beginning of this decade, many governments in

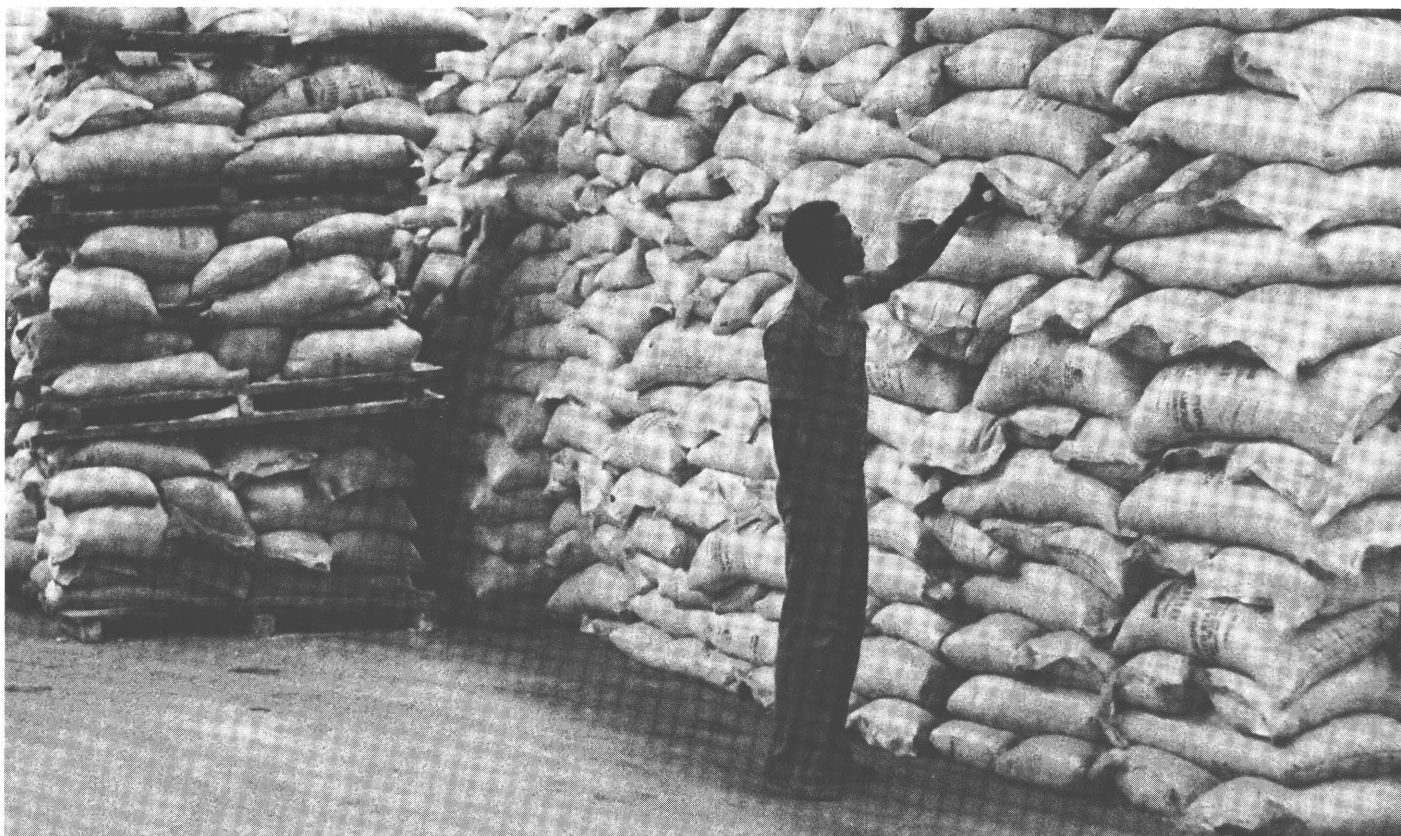
the developing countries put greater emphasis on agriculture, as did the developed countries in their aid programmes. The FAO is now working with the whole UN system on a new international strategy for the future. Our study of agriculture up to the year 2000 will reveal the need to give greater priority to agricultural development and to the wider field of rural development as a whole. The sort of rural development which improves the standard of living of millions of small farmers and rural workers without land of their own is one of the keys to the reduction of poverty. I hope that our World Conference on Land Reform and Rural Development in July 1979 will be a great help in defining the necessary government action.

Low purchasing power in rural areas

► *The distribution of world food supplies often seems to be more of a*



The food situation in the Sahel (photo: Upper Volta) is still precarious. The drought-stricken countries need \$ 2900 m in aid over five years



The World Food Programme supplied this maize for a rural development project in Togo

problem than producing the food. What is the FAO's role here?

— This is far too linear an argument. Grain production is only due to increase by 2% in 1978. The population is on the increase and many countries will go on having a problem of malnutrition even if food is distributed fairly throughout the world. There is a surplus in North America and West Europe, it is true, in contrast to the shortages in Africa and Asia, but the basic problem is not that food is badly distributed. It is that purchasing power in rural areas is so low. The FAO is trying to solve this problem, first of all by helping improve rural development. The 1979 conference should therefore put forward global measures that will improve the poor standard of living suffered by the two-thirds of mankind in rural areas.

Particular attention will have to be paid to ensuring an adequate flow of investments into these rural areas. The key is to decide what institutional changes will involve the masses in the development process. Each country must obviously find ways that are in keeping with its own local conditions and cultural values. The FAO has little or no influence over government decisions. It can only encourage international cooperation to bring about integrated, fairer and better-balanced rural development and define what practical

action is required to achieve this aim. Secondly, the FAO can try to discourage the industrialized world's protectionism, so as to achieve greater harmonization of agricultural policies. And that will take some time.

World food security — safety margin is slight

► *Do you think world food supplies are more dependable than they were?*

— Obviously things are much better than they were during the world food crisis of 1974, as is apparent from the fact that, the USSR and China apart, world grain stocks represent 19% of annual world consumption and are now slightly higher than the minimum reckoned necessary to cope with any major world agricultural disaster. But the improvement is slight and there could easily be a set-back. In addition to the fact that production in the developing countries is increasing all too slowly, most of the world stocks are concentrated in the industrialized countries, the US in particular. A recent world food survey revealed that there are 500 million people in the world without enough to eat and that there are still 72 developing countries where the diet falls short of the minimum *per capita* calorie requirement. The Sahel, Viet Nam, Laos and Ethiopia have all

had serious shortfalls because of bad harvests. It should also be remembered that most regions, with the exception of Africa, have had good weather for three seasons running and that sooner or later there is bound to be a poor monsoon in the overpopulated area of southern Asia, where famine is a constant threat. We are now concerned about the terrifying invasion of locusts in East Africa and some parts of Asia. Meanwhile, the World Food Conference's 10 million t food aid target has not yet been reached.

Food aid is not charity

► *How do you think food aid should be used as an instrument of development?*

— Food aid is not charity. Its aim is to help governments mobilize their own resources and become as nearly self-sufficient as possible. The World Food Programme, which comes under the FAO and the UN, is only a catalyst providing such things as rations for the unemployed and for workers building new roads, hydraulic and electric installations and dams — i.e. anything that will help develop agriculture or the economy as a whole. Food aid also goes to pregnant women, mothers and children, students and, in certain cases, to displaced populations.

The world food situation: outline and priorities

The world food situation is pretty bad. Last July Mr Saouma gave the UN Economic and Social Committee a depressing picture, which is summarized below.

First, Mr Saouma stressed that not only had the second development decade target of a 4% p.a. food production increase not been met, but that there had been a tendency towards a decrease in the '70s. In the developing countries, the growth rate dropped from 2.9% in the '60s to 2.6% in the '70s.

And the gaps widened. The 45 countries worst-hit by the economic crisis, most of them in Africa, only saw their food production rise by 2%, which was far from keeping up with their population increase. The biggest drop was in Africa, where *per capita* food production decreased by 1.4% between 1970 and 1976.

Food aid obviously covers some shortfalls, but the developing countries still have to import food at mar-

ket prices. In 1976, the non-oil producing developing countries spent \$10000 million (some 80% of the official development aid received that year) on it. If the present situation continues, the developing countries will see their grain imports soar from today's 66 million t to more than 90 million t in 1985. In absolute terms, the FAO estimates that more than 450 million people in developing countries with free market economies (i.e. one quarter of their total population) suffered from malnutrition between 1972 and 1974.

Mr Saouma also suggested what might be done to right the situation. The FAO considers that global aid of \$8300 million (1975 prices), \$6500 million of it as grants or soft loans, is needed every year. And at least one third of official development aid should go to agricultural development in the broadest sense (only 10-15% of total DAC aid and about 20% of total OPEC aid now goes to this) and as many donor countries as possible should reach the target of

0.7% GNP in official development aid. The international wheat agreement of 1971 should be reviewed and world trade made more flexible. According to the World Bank, the abolition of tariff and non-tariff barriers for agricultural products could push up the developing countries' export earnings by \$6000 million by 1985.

Mr Saouma emphasized the importance of planning and designing agricultural programmes and projects properly, a particularly difficult task for poor countries. He concluded by appealing to both developed and developing countries. As he saw it, no country was really independent if it could not feed its people. The developed countries should help the developing countries by trying to make up their food shortfalls (global food aid = 10 million t p.a. or even 15-16 million t in 1985) and by joining with the local authorities in the developing countries to give food and agriculture the priority they deserve. □

Generally speaking, food aid is a support for the balance of payments of the poorest countries which lack the means of regularly importing the products that are sometimes vital to feed their populations.

The need for reserves

► *As emergency aid, can food aid always be provided by the international market without delay?*

— No, it can't. The supplies intended for emergency food aid are inadequate. I know this is true because I am unable to meet the very many requests I receive. Although there are no precise statistics on emergency requirements in the world today, the FAO reckons that they are around 2-3 million tons of grain on average per annum, far beyond the emergency food stocks we have at present. The best proof that

such a deficit exists is the fact that we have still not managed to achieve the minimum target of the 500000 t reserve of international emergency food aid fixed by the UN General Assembly. There are no permanent reserves as such and replenishment depends on unpredictable gifts. I hope that the governments have at last agreed that we do need permanent food reserves in the world today. However, even if the requisite reserves existed, they would be inadequate to meet dramatic situations like those in Bangladesh or the Sahel. This issue will again be discussed at our next committee meeting on food aid and programme policies in the autumn. One of the main problems in the Sahel, as I was able to see for myself, is the inability of the countries concerned to handle the administrative and logistic problems of transporting and distributing supplies from outside and this is why the FAO encourages the developing countries to constitute national emergency stocks of their own.

The precarious situation in the Sahel

► *After your recent trip to the Sahel, can you see any short- or long-term ways of providing a practical answer to the food problem, which is particularly severe in this part of the world?*

— A considerable effort has been made since 1974 to right the economic situation in the Sahel countries. In 1977, the equivalent of some US\$ 1200 million was granted, in cash and in kind, as foreign assistance to these countries. It mainly covered emergency schemes and projects to develop the Sahelian economy via investments in agriculture, industry and infrastructure. But, in spite of that, the means provided will still be inadequate for two or three years to come and there is little likelihood of the population of the region having enough to eat during that time.

FAO estimates suggest that food aid should total at least 580 000 t over the period November 1977 - October 1978. However, there is a 145 000 t shortfall to cover, including 80 000 t for immediate consumption and 65 000 t to reconstitute reserves. Only 70% of requirements for the development of agriculture are covered. And finally, the means currently available are quite inadequate to ensure the transport and distribution of the food aid supplied.

It is increasingly clear that the economic situation in these countries has deteriorated badly, due to the drought, and that the rural populations are the principal victims.

Studies of the long-term requirements of the countries affected by drought reveal that US\$ 2 900 million is required for economic assistance over a five-year period. Much of this should

be allocated to rural development and to increasing food resources. However, donors have so far been very reticent in providing support for these particularly important sectors.

The rational planning and harmonious implementation of development projects in the Sahel are still distant objectives, which is particularly worrying bearing in mind that, even if they were achieved within the required time limit, they would have no real effect in the immediate future.

To conclude then, the food situation in the countries of the Sahel is still precarious. Immediate, practical measures are needed to provide a minimum of security as regards food supplies over the next two or three years. This will only be possible if we have firm commitments and sound coordination in respect of external aid, and if greater

help can be given for the local development of production and the distribution of food.

Measures such as these cannot be applied piecemeal. Sound planning is required to help the governments of the Sahel meet their immediate needs until medium- and long-term development schemes take effect.

FAO-EEC: greater cooperation

► *There has been greater contact between the FAO and the EEC in recent months. How do you think this cooperation will develop, both in policy and in operation?*

— The FAO and the EEC have got closer over the last few months. I can only say I am pleased about it since, obviously, there are many questions that are of interest to both our organizations. A continuous exchange of information and experience, better mutual understanding of programmes, heightened cooperation and concerted or joint action are all very much of interest to both of us and this is why I recently put someone in charge of FAO-EEC liaison to facilitate relations, promote contact and strengthen this cooperation as much as possible.

I should also like to mention another, most interesting FAO-EEC departure — the decision to organize periodic high-level consultations on development problems, the first of which is scheduled for Brussels at the end of September.

This will be an opportunity to compare and iron out the differences in our opinions and ideas on development policy. Contact such as this should enable us to get to know each other's programmes with a view to each providing support for the other in whatever we undertake. But, above all, I hope that it will be more than a simple exchange of information and lead to genuine cooperation at operational level. It already exists of course. The Sahel is an example and food aid and emergency aid are others. But I am convinced that it could be intensified and extended, to the benefit of the recipient countries. □

Interview by
Roger DE BACKER

Food aid in a Ougadougou primary school: food aid is also a means of economic development



PHOTO FAO

Apartheid: an aberration

UN committee chairman Leslie Harriman in Brussels

Those who are not, directly or indirectly, the victims of apartheid (racialism) cannot imagine the horror of it. Imagine being one of 20 million people who are foreigners in their own country, condemned to inhuman treatment and suffering unthinkable anywhere else in the world today; South Africa is still the only country to have built up racialism into a doctrine and a political and governmental system.

Exasperated Africa and the international community cannot allow this aberration to continue for much longer. That is why a UN anti-apartheid committee has been created, chaired by Leslie Harriman of Nigeria.

As part of his activities during the UN's International Apartheid Year, which began in March 1978, Leslie O Harriman, chairman of the Special Committee on Apartheid of the United Nations, made a visit to Brussels at the end of June. His contacts included ACP ambassadors, Belgian ministers, EEC officials, and representatives of trade unions and non-governmental organizations. Mr Harriman said, during a press conference, he had come to Belgium because of the various measures against apartheid which had been taken by the Belgian government and non-governmental organizations, and to draw attention to the importance of European action against racism in South Africa because of the important economic links that exist. He believed that during International Anti-Apartheid Year the EEC member countries should, as the principal trading partners of South Africa, put economic pressure on the regime and provide assistance to the front line states. He emphasized the growing danger of wider conflict in southern Africa as a reason for urgent action.

Investment by European firms: indirect support to apartheid

Mr Harriman, although encouraged by what some EEC countries had done,



Leslie O. Harriman

"We hope that attachés from South Africa will all be relieved of their duties and their presence ended in Europe"

thought the role of what he called the 'core EEC countries' — Britain, France and Germany — was crucial. He saw investments as one of the areas where immediate action was needed. "The first act of the EEC, the code of conduct(1), is a good beginning", he said, "but it does not go far enough. We believe that further investment in South Africa should be stopped, or where multinationals insist, the exploitation of labour should be stopped. The conditions under which we would be able to see further investment would be where workers have a say in their wages structure, and have more legal trade union rights, organized and unorganized, across the board of commercial and industrial concerns". He pointed out, however, that this limited action was far short of OAU demands "which called for the dismantling of existing investments". Mr Harriman had particular praise for the trade unions and churches in the international struggle against apartheid. "There is no difference between exploitation of labour in our part of the world", he said "and exploitation in another, but it differs in

(1) See the 'Courier' no. 46, November-December 1977, page XIV (yellow pages).

intensity, and we are very happy that labour unions throughout the world appreciate this and are united across the ideological lines in order to help.

"We are happy that the churches, again across denominational lines, are working with us to get over the fact the form of Christian nationalism practiced in South Africa is against all norms of nationalism and Christianity".

Arms and nuclear embargo on South Africa

In addition to calling for the full implementation of the mandatory UN arms embargo on South Africa and an end to all nuclear collaboration with the regime, Mr Harriman called for the expulsion of South African military attachés in all countries as a necessary complement to the arms embargo. "We hope that attachés from South Africa will all be relieved of their duties and their presence ended in Europe", he said. On the question of nuclear cooperation, Mr Harriman said his committee was worried by reports of South African success in this field and unconvinced that pressure would succeed in getting the Vorster government to sign the Treaty on the Non-Proliferation of Nuclear Weapons.

Combatting South African and pro-South African propaganda

Of particular concern, said Mr Harriman, was the extent of South African propaganda in Europe justifying its policies. He mentioned, since he was in Belgium, the use made of the linguistic affinities between the Afrikaner community in South Africa and Dutch-speaking people in Europe, in the propaganda campaign. He praised the role of anti-apartheid groups in combatting such propaganda. Mr Harriman was also concerned that the issues involved in southern Africa should not become part of the ideological differences that divided the world community. "Any moves to divide Africa, or divert its attention by cold war, are a disservice to the cause of freedom", he said.

Mr Harriman suggested to mobilize European public opinion

At the European Commission, Mr Harriman had discussions with the pre-

sident, Roy Jenkins, and also development commissioner Claude Cheysson. "With Mr Cheysson I covered all fields" he said, "the code of conduct and further measures. Regarding the code we talked about the impact of the various European institutions on the isolation and overthrow of the racist fascist government of Vorster. We were impressed by the warm reception and concert of views". Mr Harriman said that in discussions with Claude Cheysson, he had suggested ways of reaching public opinion in the EEC countries through political parties, churches, trade unions and parliaments. Mr Harriman said he had expressed the hope that the EEC would consider more effective action at the Community level and by its influence on member states especially as regards nuclear cooperation with South Africa, loans to South Africa, investments in South Africa, and assistance for the education of South African refugees. He had also suggested active participation by the EEC in the observance of International Anti-Apartheid Year.

The EEC officials had assured him that the EEC provided no preferences to South Africa and would provide no such preferences, Mr Harriman continued. They had informed him that the EEC could help with the education of South African refugees if that was proposed by the ACP states under the procedures of the Lomé Convention. This would need to be looked into, he said. The question of the code of conduct adopted by the EEC in September 1977 for the operations of transnational corporations in South Africa came up frequently in the discussions, Mr Harriman continued. Mr Harriman said he



The official emblem of International Anti-Apartheid Year proclaimed by the UN in 1978

believed the code would not be fully effective unless it was reinforced as a minimum, with the prohibition of all new investment and even the expansion of existing enterprises, unless trade union rights were reorganized. The trade unions in the European Community had pressed, rightly, for penalties against employers who did not implement its provisions. The first reports by governments on the implementation of the code of conduct were due soon. The United Kingdom had

already published a White Paper. "We will need to see whether the reports provide adequate and truthful information so that the trade unions and governments in the European countries can take action against recalcitrant employers", Mr Harriman said. He was convinced of the importance of contact with the European Parliament as a means for reaching the political leaders, parties and people of the members of the EEC. That Parliament would become even more influential after the elections next June. Mr Harriman said he proposed to write to the speaker of the European Parliament inviting its cooperation in observance of International Anti-Apartheid Year. The Committee might perhaps consider the desirability of a mission to the European Parliament at a later stage, he said.

African, Caribbean and Pacific group: concern in southern African liberation

Mr Harriman said he had had a very useful meeting with the ambassadors of the African, Caribbean and Pacific group (ACP) concerning the possibilities of initiatives by that group in favour of southern African liberation in the context of the Lomé Convention. □

LUCIEN PAGNI



Leslie Harriman and Thérèse Gastaut, head of the UN office in Brussels

"Any moves to divide Africa, or divert its attention by cold war, are a disservice to the cause of freedom"

Italian industrialists: between the Mezzogiorno and the ACP markets

Industrialists from five EEC countries have so far given their opinions on the conditions of investment in the ACP states. In no. 39 of the *Courier*, French, English, German and Dutch businessmen described their experience of investment or gave their opinions as potential investors. Danish businessmen did the same in no. 45.

We continue the series in Italy, with a number

A wide variety of industrial experience

Although its industrial development did not begin until well after the boom in some countries of northern Europe, Italy rapidly built up a very large industrial sector which now employs more than 44% of the working population, putting it in fourth place, behind Luxembourg, Germany and Switzerland, in this respect. The industrial sector is vital, but it is concentrated in the north of the country; the south, the Mezzogiorno, is to some extent still in the throes of development. This will affect investment abroad, since the Italian government wants to encourage the economic and industrial development of the Mezzogiorno. Its efforts will also lead to experiments in establishing basic industry in an underdeveloped region which could well be of interest to some African countries. Other local factors have certainly influenced Italy's industrial development. Its population of 56 million is spread over a 300 000 km² north-south strip with a range of mountains down the middle; this presents difficulties as regards setting up infrastructure and industries. Italian industrialists are therefore used to tackling geographical problems similar to those in the developing countries.

The representatives the *Courier* met also stressed the fact that Italy, unlike other EEC countries such as France and the UK, has no long-standing historical ties with Africa (apart from brief periods in Libya, Ethiopia and Somalia) which could either help or hinder industrial cooperation with the developing countries. Linguistic problems were not seen as a real barrier to cooperation.

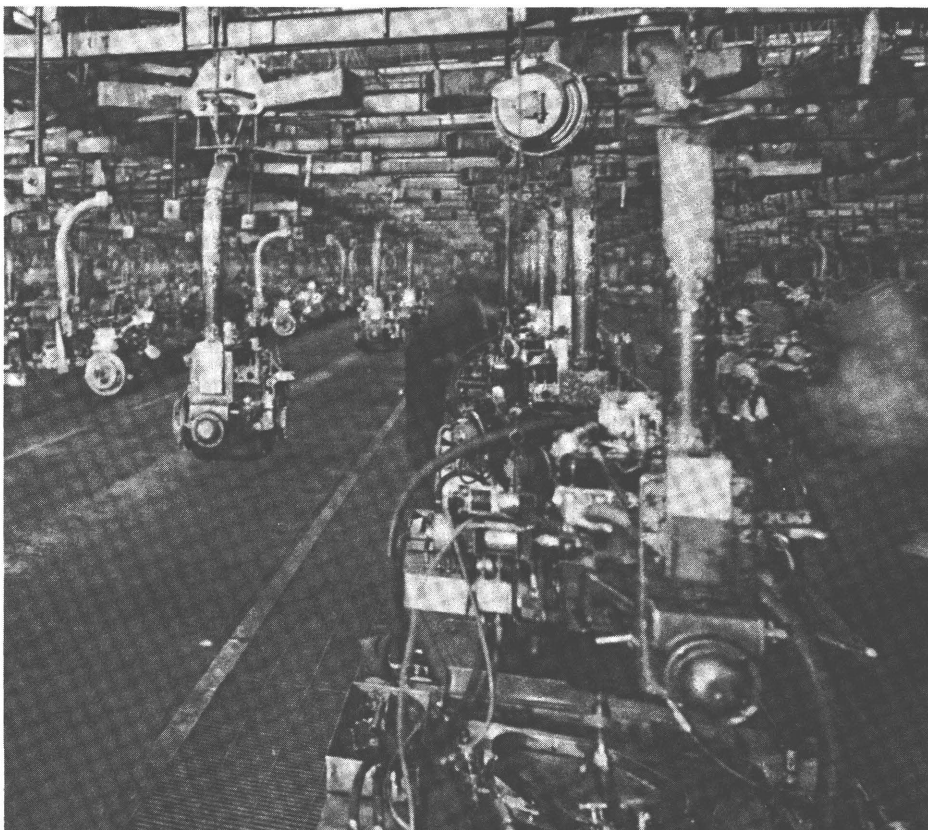
of representatives of Italian industry including managers of the Confindustria, Italy's general confederation of industry, of the big state holding companies (in this case IRI, the institute for industrial reconstruction, and ENI, the national hydrocarbon company) which are typical of Italian industrial development, and of other private concerns (the Fiat group, SNIA, Gruppo Finanziario Tessile and Techint) of varying size and with different interests.

General constraints

But there are other factors which directly affect the Italian businessman's ventures abroad. Although the government tends to be neutral (see the OECD report, "Investing in the Third World"), there are clear restrictions on exporting currency. For example, a ministerial decree of December 1975 obliges the Italian businessman to deposit 50% of the value of any investment abroad with the Banca d'Italia,

without interest, until the said capital is returned to Italy. State firms also have to devote the majority of their resources to local industrial development, primarily in the Mezzogiorno. There are similar incentives for companies and groups in the private sector.

Generally speaking, until last year there was no national legislation to protect the Italian businessman against non-commercial risks to his investment abroad. The Ossola Law (named after the minister for foreign trade), introdu-



Italy's industrial background offers plenty of scope for the transfer of technology to the developing countries

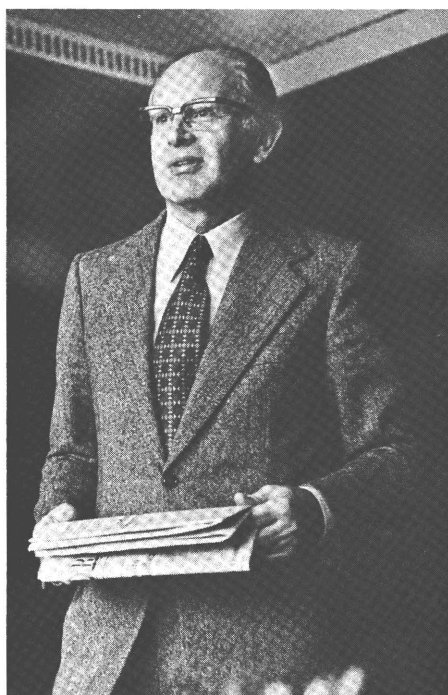
ced on 24 May 1977, provides for such investments to be guaranteed and protected. This law has been passed but some technical details have still to be worked out before it becomes effective.

The Confindustria: creating the right climate

Alfredo Solustri, co-director general of the Confindustria, and Sergio Orefici, head of the confederation's department dealing with the developing countries, feel that the Lomé Convention has not lived up to their expectations as far as industrial cooperation is concerned. The reason for this, they say, is that the ACP countries fail to provide an acceptable investment climate. Mr Solustri thinks there are one or two basic questions to be answered before industrial cooperation is expanded. "As industrialization can destroy certain moral and spiritual values in a rural, non-industrial society, the ACP countries must clearly state whether or not they want economic development. If they do, is it to be achieved by industrial development, or are they putting their money on agriculture, the tourist trade or some other sector? If they opt for industrial development, will they go for private enterprise or an industrial state conglomerate along socialist lines? If they opt for private enterprise, which the Confindustria represents, then the right climate must be created, both in the form of infrastructure, trained workers, etc., and through a legal framework covering investment codes, tax laws, guarantees, protection and international arbitration".

Mr Solustri emphasized that insurance against non-commercial risks was an important consideration in this legal framework, since "the uncertainty facing the businessman is less predictable and less serious in Europe than in Africa, where political/military events often occur, causing direct or indirect damage to the interests of foreign investors". The Confindustria therefore takes an active part in the work of UNICE, the European Communities industrial union, on producing a European investment guarantee system for projects of a certain size and of a multinational character. The guarantee will be complementary to national ones.

In the prevailing mood regarding industrial development, Mr Orefici has noticed "the conscious and unconscious bias which many ACP countries have with respect to certain economic systems which resemble the former



Alfredo Solustri
Co-director general of Confindustria

colonial structures". But, for him, "industry must be developed in cooperation with the countries with free market economies, as the state trading countries only provide aid in small quantities and tie it to certain political aims". In the view of the Confindustria, bias against investments by multinationals also exists. "Companies in a position to invest in the ACP countries are usually multinationals and when we agree to the need for a code of conduct on the rights and obligations of these companies and of the host country, we must still change the developing countries' all-to-frequently negative attitude to these multinationals", Mr Solustri felt.

The Confindustria considers greater industrial cooperation a necessity, particularly from the standpoint of Europe's supplies of raw materials and even semi-finished products for completion in Europe.

But the industrialists recognize that Italy only has limited financial resources at its disposal. It also has a precarious balance of payments, increasing local unemployment and unions that are unenthusiastic about investments abroad. Their main tactics are nevertheless to promote the on-the-spot processing of ACP agricultural produce and minerals by means of industrial units supplied by Europe. Without neglecting the role of small and medium-sized businesses, they place more importance on big firms and consortia which cover the whole range of

production and marketing processes, right down to selling any products supplied as payment (an increasingly common system in East-West trade).

The CID — greater scope

The Confindustria is generally in favour of ACP-EEC cooperation and willing to give as much help as possible to Italian businessmen interested in setting up in the ACP states.

It hopes to see the CID's scope widened and the organization become more than just an industrial contact bureau. "We want the CID to become an operational centre that can give the ACP advice about industrial programming and economic projection. The sort of industrial development that could bring our Lomé partners the greatest benefit from the CID is based on the processing of raw materials and uses the sort of technology that is right for and favourable to the local labour force; they should avoid wanting at all costs to compete with more experienced and often more competitive countries", Mr Solustri said.

The state holding companies

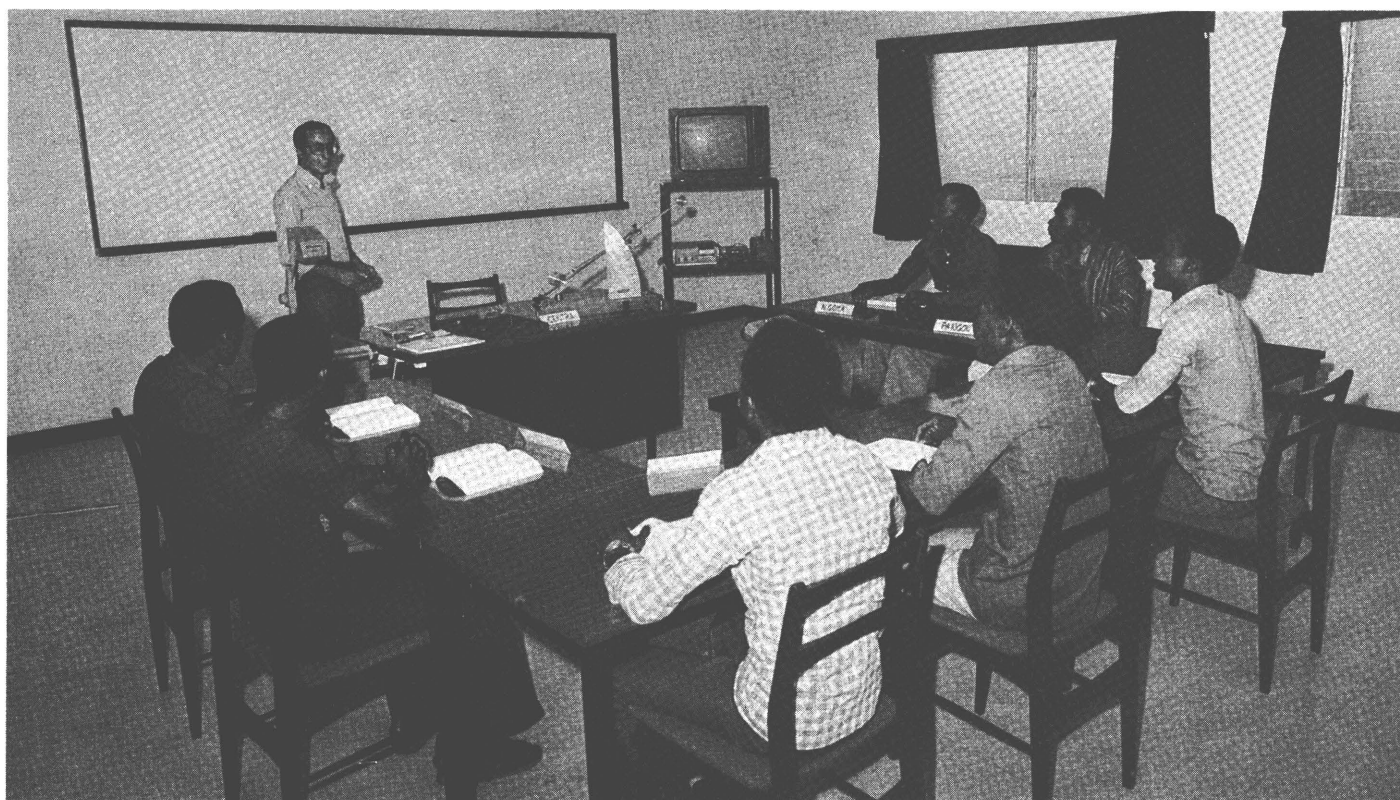
IRI says "big investments aren't enough"

The IRI group, combining more than 150 firms, ranked fourth among Europe's biggest industrial enterprises in 1976 (ENI was seventh). It has sound investment experience (2500 million lire investment capacity in 1976) and a long tradition of management in companies in which the state has a holding.

The law requires IRI to channel at least 60% of its investment into the Mezzogiorno. IRI, with interests in such varied activities as the iron and steel industry, airlines and TV channels, offers its partners in the developing countries all the advantages of a multi-sector group involving a very wide range of transferable technology.

"There is no point in building cathedrals in the desert"

Its foreign interests in mining, iron and steel (the Finsider company), as Attilio Lo Gatto of IRI's foreign relations department said, are spread over



Congolese trainees follow specialized courses at the Agip-Eni base in Loango (Congo)

a good many countries to reduce the risk of interrupted supplies, and also "to encourage genuine industrial co-operation rather than simply digging out raw materials".

In cooperation with the foreign ministry, the IRI runs annual training courses and classes for management staff skilled workers and technicians from the developing countries. It has already contributed to the organization of the management structures of industrial state holding companies in some developing countries, notably Zaire.

Mr Lo Gatto feels that Italy's experience with developing industry in the Mezzogiorno could be useful to certain ACP countries. "Although major investments (for example the Taranto iron and steel works and the Alfasud factory) have been made, they are not enough to create a basic industrial fabric of small and medium-sized firms. The need to stay profitable is every bit as important as the need to invest. There is no point in building cathedrals in the desert. Big investments are not enough, also bearing in mind that, in developing countries, we come up against the conflict between capital-intensive, advanced technology and local employment, particularly if the investment is in an export industry."

Bearing in mind the state of Italian public finances, the IRI representative

was in favour of introducing a European guarantee for investments.

ENI — contributing to industrial development

Raffaele Santoro, deputy head of external relations, explained that the ENI's policy was, unequivocally, geared to supply. "The very nature of the products we are after, i.e. energy products like oil, natural gas and uranium, means that we have to accept a certain number of problems which might discourage other types of investors, since we invest at almost any price in places where we think we will be able to obtain these products".

By the end of 1976, the ENI group, which employs more than 100 000 staff (its most active firm abroad is Agip, which specializes in prospecting, producing, refining and distributing petroleum products) had poured 960 000 million lire (828 000 million into minerals) into direct investments in Africa.

It has experience of several nationalizations, "some amicable and others leading to dispute", and ENI is clearly interested in the creation of a European investment guarantee system to complement the Ossola Law, even if, as Mr Santoro stressed, "it is not yet clear whether the law will have retroactive affect or just apply to new investments.

But a Community guarantee system seems very important since in the ENI group, as in many other companies, we are currently taking another look at the question of whether we need to launch a new investment policy. There has been a long period without one, a period of reflexion, caused perhaps by Italy's internal problems, by those of the company itself or by negative experiences in certain countries." Gianni Bianco, head of department, stressed that, in addition to the guarantee, decisions had to be taken "on the method of capital transfer in the light of the general shortage of foreign exchange in the ACP countries, with the particular aim of defining fair expropriation payments and how to transfer them".

The ENI representatives felt that the questions of guarantees and capital transfers were finally outside the scope of national legislation and investment codes "which, although drawn up with the best will in the world by the host countries, can still be broken by a unilateral decision."

The new ENI investments, Mr Santoro felt, could be in the petrochemicals sector. "I am sure that participation and not passive acceptance of investments is called for in this sector and we must therefore collaborate closely with public ventures in ACP countries such as Nigeria."

The ENI also attaches considerable importance to proper training for local

staff. It is therefore anxious to make an active contribution to industrial development in Africa. Its participation in a new natural gas liquification project in Nigeria, along with other oil companies and the Nigerian government, is the best proof of this.

The private sector

The Fiat group and the size of the African market

Fiat represents 3% of Italian GNP and 10% of the country's industrial production. This conglomerate of 600-plus firms, employing 340 000 people, had a Lit 13228 000 million turnover in 1977. At the end of that year, investments totalled Lit 1001 000 million, 198 000 million of them overseas.

Fiat means cars. But the representatives of the Turin group, Giorgia Brizio and Mario Capitani, director and deputy-director of the international development division, stressed that it means much more than this. It has 11 main sectors of activity: automobiles (36% of turnover); commercial and industrial vehicles; agricultural tractors; cons-

truction machinery; iron and steel; components; machine tools and production systems; civil engineering and land-use; energy; rolling stock and rail-torsed transportation systems; tourism and transport; and miscellaneous: various financial companies, motorways, etc.

Fiat has often been a pioneer in the field of foreign investments and the exportation of know-how. In addition to major interests in South America (Brazil and Argentina), it had set up large firms behind the Iron Curtain well before the Helsinki agreements.

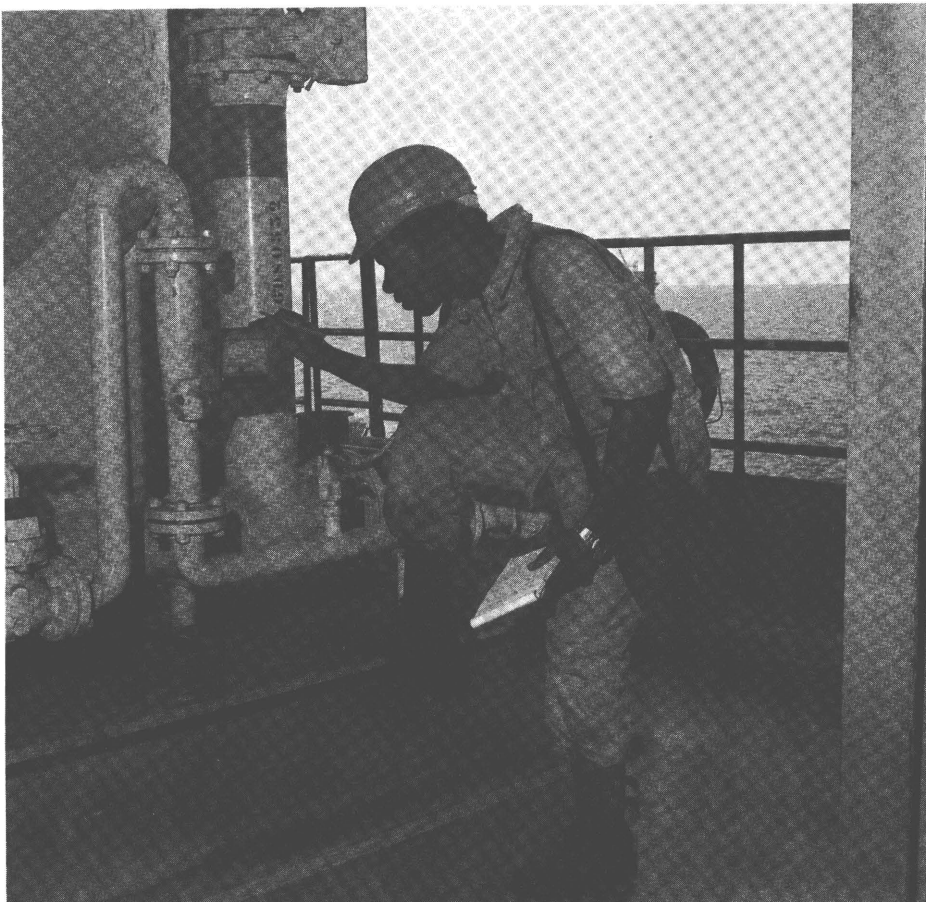
As regards investment in Africa, the Fiat men felt "the market tends to be too small, compared to South America, for example". Although Fiat sells all over Africa and has large-scale civil engineering activities there, it still has few directly productive investments (Zaire, Zambia, Nigeria and Ethiopia being the ACP countries involved). Mr Brizio stressed that there tends to be a "difference between the logic of the market and the desires of the government in most developing countries, as the size of the African market, for example, is such that we are unable to make viable investments in a sector where extremely advanced technology

is called for". As he sees it, "black Africa's volume of production at this high level of technology is not yet adequate". Mr Capitani said, "on the one hand, most ACP states can only absorb a limited quantity of large-scale investments and, on the other, we have our responsibility to Italy, where we want to invest 80% of our resources".

Despite the limited size of the African market, the Fiat directors stressed that Africa south of the Sahara lacks the regional economic integration that is emerging between other developing countries. For example, Fiat cars produced in Egypt are exported to other Arab countries. As regards productive investments, Nigeria is, from Fiat's point of view, the African country with the right market and enough local capital for joint projects; the Turin firm has contributed 40% of \$10 million capital to a factory (total value of investment = US \$50 million) which will produce 4000 tractors and 6000 trucks a year. It will start operating in 1979. This production capacity seems, to Fiat, the minimum that is feasible and viable for Africa at the present time. In addition to supplying capital and technology, Fiat is training the Nigerian workers and staff, since, as Mr Capitani said, "an investment project must be integrated with the national development process". Fiat thinks that "any project that adds value to natural resources and local labour is worthwhile". For the Fiat group, its own interests and those of the developing countries will both be served if genuine industrial development can be encouraged, as "higher standards of living and greater purchasing power in these countries make for the greater feasibility and profitability of an investment, which itself generally leads to the creation of other industries".

As to non-commercial risks, neither Mr Brizio nor Mr Capitani denied the interest of a European guarantee system, but both stressed the importance of mutual confidence. "Our group has only experienced one case of forced nationalization. In the other cases, satisfactory compromises were arrived at. First and foremost, a foreign investor has to toe the line in the host country", Mr Brizio said.

Outside Nigeria, where it will also be participating in a factory making tyres for industrial vehicles and where its Impresit branch is running one of the biggest integrated land improvement projects (the 300 000 ha Bakolori scheme), Fiat can see few immediate possibilities of productive investments in the ACP countries. The markets are too small-scale.



A trainee gets first-hand experience on an oil-drilling platform off Loango



Fiat's Mirafiori factory near Turin (Italy)

SNIA, the Gruppo Finanziario Tessile and Techint

SNIA employs 33000 people in Italy and 10000 in affiliates abroad. Its general policy is to choose a market which has reached a reasonable level of consumption and has good development potential, and get a foot in the door. This varied group (chemical fibres, textiles, chemicals, engineering, defence and aero-space, mining, *et al.*) considers that the African market is not yet worth investing in, although the development potential is there. As Giancarlo Regalia, head of the chemical fibres division, explained, "two years ago, one of our representatives went fully into the investment possibilities in Africa and came up with the conclusion that there are none in the short term".

SNIA's investments in the developing countries (Argentina, Brazil and India) generally emerge from cooperation with a former trading partner. SNIA takes a minority holding and puts in its experience and know-how. Lino Cardarelli, director of external relations, stressed that "The policy of not exporting the best technology possible, from a fear of competition, does not pay off, because if the local partner has in fact decided to make the investment, he will in any case get started with a foreign partner who is willing to provide the technology he wants".

Mr Regalia feels the non-commercial risk guarantee is only one of the "para-

meters" of an investment. Personally he feels "it will be possible in the long run to take part in the development of African industry, not with the aim of taking advantage of the low costs there, which are not a valid parameter, but to develop a worthwhile local market".

The Gruppo Finanziario Tessile mainly concentrates on the manufacture of clothing of high quality and finish, employing 7200 highly skilled workers. Although it has commercial links with Africa, local consumption of its type of product is, in view of the climatic conditions, too low. And producing clothing in Africa for sale in Europe would mean entering into direct competition with certain semi-developed countries which already have a lot of experience in this field. Add to this the absence of suitably skilled workers in Africa at the moment and it becomes clear that there are no prospects of this company making any direct investments in Africa.

At Techint, a technical/engineering consultancy with more than 700 employees around the world, company secretary Cesare Bottino put the accent on the company's role as a transferer of technology. "The real industrialization problem facing the developing countries is access to know-how, and a real transfer involves training staff in the best possible way so they can cope with the whole production process, right up to the ready-for-use stage or even marketing", he said. Techint has so far had few

requests from Italian businessmen interested in setting up in Africa, particularly as compared to Latin America or the Arab countries. Mr Bottino thinks the small and medium-sized firms in Italy often have exportable technology, but tend not to have access to the basic economic facts about the developing countries which would enable them to invest there or to find a local partner. He feels that these countries should be able to clearly state the conditions of operation and likely profits themselves and, by offering guarantees and capital transfer possibilities, show just what type of investments they are hoping to attract.

Nigeria, the focal point

Nigeria is, of all the ACP countries, the most popular with Italian economic operators. The availability of local capital and the potential or existing market provided by a population of 80 million are only two of the reasons.

Africa in general is of considerable interest to Italian businessmen who are monitoring its industrial development closely, although they see little immediate opportunity for directly productive investments. Africa still has too few assets, bearing in mind its population and level of consumption, as compared to the other markets open to Italian operators in Latin America (where historical factors also affect the issue) and Asia. □

R.D.B.

From Lomé to the negotiations for a new convention

by Hans-Broder KROHN(*)

"In my seven years as head of the development directorate, the Community's relations with the Third World changed. The main thing was the change from Yaoundé to Lomé, not just in the number of partners and the geographical scope, but in the very nature of our contractual relations.

Yaoundé to Lomé was a qualitative change in developed/developing country relations

"Of course, the Yaoundé Conventions contained the seeds of Lomé. There were three elements. Financial and technical cooperation by the EDF, trade arrangements and institutions. But at the centre was the EDF. The comprehensive character of the agreement was developed to become one of the essential features of Lomé which covers all aspects of development, all aspects of relations between developing and industrialized countries; trade, commodities within Stabex, industrial cooperation and, of course, financial and technical cooperation and the EDF. So partnership, the spirit of mutual understanding, was already there in Yaoundé. But in Lomé, and I say this in the light of my experience as a negotiator, we were faced with partners who knew their own importance and weight. This was an extremely important qualitative step forward. This change, this qualitative advance from Yaoundé to Lomé should not come as a surprise to anyone. Remember that the Lomé negotiations between the EEC and the 46 ACP countries took



Hans-Broder Krohn

place at the beginning of a new phase in relations between the developing and the industrialized worlds. There was the oil crisis, the North-South dialogue and the quest for a new international economic order. All this meant a profound change in relations between the world's rich and the world's poor and the Lomé Convention obviously reflects it. I would even go so far as to say that Lomé is an original answer which a group of more than 50 developing countries and 9 industrialized countries in the European Community, together provide to the world's north-south problem.

"This is something new. I should also say that I feel the change of terminology is significant. In all the Community languages, we always used to talk about development aid. Now we talk about development policy. I must say that I am very proud to have been responsible for DG VIII at the very time when relations between the EEC and the developing countries went from financial aid to cooperation policy and to partnership. That is to say to something vaster, where the various components were better coordinated, to something more political.

Progress with development and mutual interests

"Have the Yaoundé and Lomé Conventions have been beneficial to our partners?

"I would rather not say anything about Lomé, for two reasons. First, we are still too close to the event. Not enough time has passed to assess results which will take more than a year or two to clarify themselves. The most important thing about Lomé is the partnership which is apparent in the fact that this Convention takes account of the interests of both partners, the ACP and the EEC countries. The results of the Convention should be judged by the mutual benefits.

"The partners themselves will provide a practical answer to the question of whether they consider Lomé to be useful and beneficial at the negotiations due to start in September. They will inevitably alter any of the clauses which have not been fully satisfactory as far as one or other of the sides is concerned. And they will also take certain aspects further, particularly industrial cooperation which will, in my opinion, become a focus of attention in future conventions. And perhaps they will add extra chapters on any aspects of developing/developed country relations which have become more important since 1975.

"I am convinced that they will give a positive answer by signing, in mutual confidence, a new convention, which will constitute further progress. So let me restrict my self to the results of Yaoundé I and II.

"Look at the results of 15 years of cooperation with the African countries and Madagascar and you will see that progress has indeed been made with development. Take the EDF-financed projects in agriculture, for example. Unlike the EEC member states' bilateral aid, the EDF channelled more than one third of its resources into agricultural development in the associated countries. I have visited many of these projects personally and so I am in a position to assure you that they contributed to the development of the rural areas in the AASM. And everyone knows that the development of such areas is essential to the economic and social development of these countries. I don't want to forget another sector, which I feel is of great importance in

(*) In his 20 years with the EEC Commission, from 1958 to 1977, Dr Krohn obtained vast experience of Community affairs. But his knowledge of the developing countries is fairly recent in that contact only began in 1970 when he became head of the development directorate-general. He stayed seven years, at the height of his career, in an ideal position to get to grips with the profound changes in the Community's development policy during this period. As director-general, he was particularly concerned with Yaoundé II and the present Lomé Convention which he played an important part in negotiating.

EDF activities, and that is road networks. Look at the road network which certain parts of Africa covered by the Yaoundé Convention now have and you will see how remarkable it is. I would almost go so far as to say that the EDF, together with bilateral aid from France, Germany and other member states, is West Africa's main road builder. So I am convinced that EDF aid has largely contributed to the economic and social development of our African partners and to regional cooperation between them.

We learned from the negotiations

"The European Community and the 54 ACP states are just beginning another set of negotiations. When I look back at the negotiations for the present Lomé Convention, I realize that when discussions between sixty or so participants last 18 months and cover such issues as rules of origin, rum imports and preferences for national firms in EDF schemes, sound organization, which is firm and flexible at the same time, is called for.

"Then there are two vital conditions. Understanding and confidence and the political will to succeed. I suppose that both these conditions are met as far as the negotiations starting in September are concerned. But this was not the case for Lomé I. The AASM had several years' experience of cooperation with the EEC, which was generally satisfactory from their point of view. But for more than half our Lomé partners, the Community was an unknown quantity and there was quite naturally a certain amount of suspicion as to its motives. And then there was a misunderstanding about the spirit of Yaoundé, which some people saw as inspired by neo-colonial aims. And finally, there was the unfortunate experience of the Arusha Agreement which certainly misled some of our English-speaking partners. So we had to overcome this distrust and this was, I think, the most difficult thing we had to do. What enabled us to succeed? Two things. The first has to do with Ambassador Sanu, who came to Brussels in a very critical, even negative, frame of mind but who became the champion of the Lomé Convention. The second has to do with the Kingston conference, during which the ACP leaders realized that, in spite of all the problems involved, the Community took their countries seriously. This was what enabled us to overcome their suspicion. The change in my friend Sanu's opinions (which he explained in a Cou-

rier interview) and the Kingston breakthrough, largely attributable to Claude Cheysson who encouraged the emergence of this spirit of conciliation and understanding which all our ACP partners came fully to share.

"Political will is essential to negotiations of this kind, since it is this which paves the way for the compromises which lead to the final agreement. But I want to return to the importance of the day-to-day work of the experts during the negotiations. Over the 18 months, we covered hundreds of problems in all fields, in industrial cooperation, in financial and technical cooperation and in trade cooperation too, and it was the difficult, permanent, day-to-day work of the experts that enabled solutions to be found. At the end, there were five or six big questions which the ambassadors and top civil servants had failed to solve and this is where political will came in.

Lomé, a limited but practical step towards a new international economic order

"The Lomé negotiations took place at the beginning of the developed/developing country world crisis which started with the oil crisis and continued with the North-South dialogue. This happened quite by chance, as it was the Yaoundé and the Protocol 22 time-tables which fixed the dates for the Lomé negotiations. But that coincidence provokes a question. Can Lomé which, as I have just said, marks a new era and a new outlook, also be considered as a model for a new international economic order?

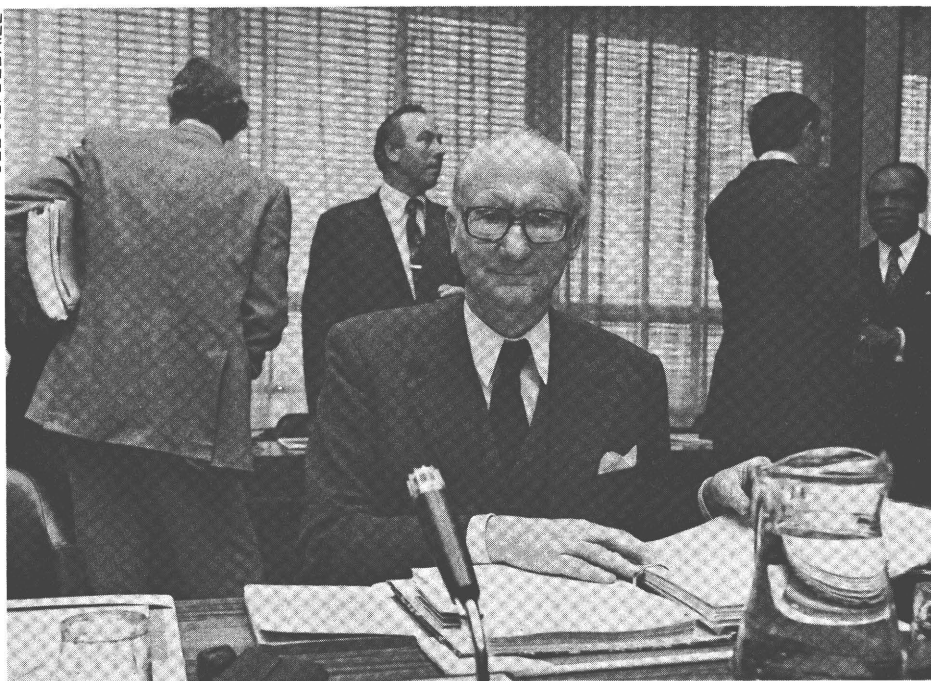
"I hesitate to call it a model, as there is no model for the new international economic order. But I think Lomé is a practical step in the right direction. I am thinking first of all of the partnership ideal which has become a reality in the Convention. I am well aware that the ACP countries complain that the consultations aren't really consultations. This I accept, but Lomé is still a club where partnership is taken more seriously than anywhere else in the world. Second, Lomé is a contract. The whole of so-called development aid policy always used to be a unilateral policy which the industrialized countries adopted to help the poor countries. Lomé, for the first time, is a contractual affair, an international contract which is also in line with the quest for a new international economic order. And finally, Lomé contains some completely new aspects (the Stabex and non-reciprocity in trade relations)

which are a practical step in the right direction.

"But in saying this, I also mean that, in the future, Lomé should go further along the path towards the new international economic order. I think that progress primarily needs to be made with industrial cooperation which should be one of the essential features of the next convention. Of course, as far as the developing countries are concerned, rural development is the big problem, but I think that industrial cooperation is becoming one of the keys to the future between the developing and the industrialized countries. So everything connected with the transfer of technology, with guaranteeing investments and with free access for ACP industrial production to the EEC market is fundamental here. If the forthcoming convention can come up with a solution, it could be used as a model in other countries. And the same goes for the Stabex, which must be developed.

"But other fields must be developed too, for it would be wrong to confine ourselves to the economy. There are political and cultural aspects too. When I say politics I do not mean interfering in members' internal affairs, but Europe and Africa cannot be indifferent about what is happening in the world today. Directly or indirectly, they are concerned. Neither Africans nor Europeans can allow Africa to become, as is happening today, a battlefield for skirmishes between the superpowers. And self-fulfilment is not just a question of the economy or of politics. Culture is also involved. We, the people of Africa, of the Caribbean, of the Pacific and of Europe have an extremely rich and diverse culture to offer and I can quite see why more organized and more systematic cultural contact, as President Senghor has always preached, should be one of the aims of Lomé policy.

"I should like to add something personal. My contact with the developing countries began fairly late in life, but I was soon convinced that we have a lot to learn about the quality of life from our friends in the ACP countries. One of the main aspects of the quality of life is culture. I am sure that greater cultural cooperation between the ACP countries and Europe would not lead to cultural imperialism on the part of the latter. Quite the contrary. I could well imagine we might create an institution comparable to the one we have set up in the present Lomé Convention for industrial cooperation. It would be a genuinely joint body, created by the Convention but with an independent life of its own.



Hans-Broder Krohn during the Lomé Convention negotiations on 30 January 1975, one month before the signature, with (l. to r.): Jean Durieux and Maurice Foley, deputy directors-general at the Commission, and Cameroonian ambassador Simon N'ko'o Etoungou

"I should now like to say a word about the frequent criticism of Lomé being a regionalist rather than a world-wide policy. I am convinced that, if this Lomé policy is a practical step in the right direction towards a fairer and better balanced world order, it is because, within a restricted geographical framework, it is easier to find practical answers to practical problems than it is in a wider context.

"The same goes for the Stabex. This is not to say that the Stabex as it stands will be used as a model for a world-wide Stabex. Doubtless the originality of the Lomé system of export earnings stabilization is a challenge for the North-South dialogue.

"The principle of non-reciprocity could also be introduced in trade relations between developed and developing countries, in the light of what has been done under Lomé.

"I have already mentioned industrial cooperation. The first thing is to find compromises between the interests of developing and industrialized countries in a restricted geographical framework, to experiment and to use any results to devise solutions at world level.

"If Lomé wants to play such an important part in the north-south dialogue, and I think it could easily do so, various aspects must be developed and expanded. Lomé is the only institution in the world today between a large

group of developing and a group of industrialized countries to apply any practical solutions to the so-called north-south problems. Think what we have been trying to do for 20 years in other circles and you will be forced to admit that it is only in a geographically restricted framework that political will can win through.

Confidence and friendship

"I worked at the Commission for a fairly long time, from 1958 onwards, and my experience has convinced me that confidence is required in any negotiations or joint discussions. This is how we began on the construction of Europe. This mutual confidence is of even greater importance in cooperation between Europeans and our partners in Africa, the Caribbean and the Pacific, because human questions mean even more to them than they do to us. The valuable thing I have learned over the last few years is that it is important to be able to work in an atmosphere of confidence and friendship. I am proud to have won the confidence of many leading figures from Africa, the Caribbean and the Pacific. If I was able to help make the Lomé negotiations a success, it was certainly because my partners had confidence in me. I don't remember how many lightning trips I made to the various capital cities to talk with ministers and heads

of state, particularly in the final phase of the negotiations. But it is frequent and direct contact of this sort which created the confidence we have had from heads of state, from ministers and from ambassadors since 1970. The negotiations were hard, but we both knew exactly what one could do or agree to and what the other could not accept. I take this opportunity, via the *Courier*, of extending my warmest thanks to all my friends in Africa, the Caribbean, the Indian Ocean and the Pacific.

The European public must be made aware of the interests it shares with the Third World

"Finally, I should like to emphasize the fact that, in my opinion, if there is one aspect of development policy which has lagged behind far too long, that aspect is information.

"It must be realized that the establishment of new relations, a partnership, with the developing countries will mean that economic and social structures in the industrialized countries will need adapting and even profoundly changing. Not just because of the developing countries' call for a new international economic order. We in the industrialized world also have every interest in a fairer and better balanced division of labour. We need the markets and the expanding demand of these young countries. We need raw materials. The developing countries on the other hand need our grey matter, our capital and our market too. So it is no longer a question of unilateral aid. It is a genuine community of interest.

"A policy of this sort will require greater physical and intellectual mobility on our part and a knowledge of the problems of the division of labour between the developing countries and ourselves. Although some people are likely to lose their jobs in some sectors of the economy, they will find employment in others in, for example, industries working for export, producing the consumer durables and goods the developing countries need. The people of Europe, the unions, the workers and the employers, must be made to understand all this. Europe is more dependent on good relations with the developing countries than the US or the USSR. First because our economy is export-oriented and geared to winning markets. Second, because, as everyone should know, we import two thirds of the raw materials we use. For us Europeans, therefore, a partnership in the



Rice picking in Madagascar

Agricultural development has always been a European aid priority

new international economic order is vital.

"The first thing the people of Europe must understand is that we cannot have a protectionist policy and that we must accept this new division of labour between the developing countries and Europe. Which means that we Europeans must change and adapt. The EEC and its member states will obviously be doing their best to see that the change, which could well lead to human and social problems in certain sectors, is not a brutal one. The people must understand. They must support this partnership. Which is precisely why an active information campaign must be run.

"The *Courier* has an important part to play in informing the general public. It is surprising to see how far the *Courier* has developed in seven or eight years. In 1970, it was no more than an information sheet for ex-EEC scholars and grantholders. And then its scope was widened to include news about EDF activities. But now, recent issues show that this magazine has become an organ of information and reflection on Community development policy. I think it is extremely important, therefore, that we now have more than just a French language edition and that, since early 1973, there has been an identical edition in English as well. In the future, I think the *Courier* should continue as it has begun. But it must strive to increase its readership in all the circles, particularly in Europe, which will feel the effects of closer cooperation between the developing and the industrialized worlds. □ H.-B.K.

EIB

Risk capital financing in the Lomé Convention countries⁽¹⁾

During the first two years of activity under the Lomé Convention (1 April 1976 - 31 March 1978), in addition to lending 126 million units of account from its own resources the European Investment Bank also provided 40 million u.a. in risk capital operations, financed from European Development Fund resources set aside for this purpose under the terms of the Convention and managed by the EIB on the Community's behalf.

These operations, principally to promote industrial development, concerned projects in 13 African countries and in the Caribbean.

Following a 'half-way' review of the use to which the funds were put, the Council of the European Communities decided to release a further 60 million u.a. for the EIB to continue with such financing during the remainder of the Convention's lifetime (up to 1 March 1980).

This article outlines the risk capital facility, which has proved to be a very flexible form of aid, and details the different investments which have been supported so far.

The 53 African, Caribbean and Pacific (ACP) countries which have signed the Lomé Convention, although diverse in many ways, share common experiences and difficulties in their economic development.

A broad profile of the ACP group shows them as young countries; excluding Liberia and Ethiopia, at most 20 years and often considerably less have passed since they attained independence.

Many of them belong to the least developed countries of the world; their per capita GDP averages out at only some 200 u.a., approximately 1/20th the average of the EEC Member Countries.

In many countries the population is small and sparsely distributed which makes development—particularly infrastructure, such as roads, water supplies and telecommunications—both difficult and costly.

Still at the beginning of their industrial development, they depend largely on exports of agricultural and mining products, with little value added in the country of origin. The majority have been severely hit by world economic conditions of the last few years (only a handful are oil exporters) and the extent to which they can borrow on the

capital markets is in most cases very limited. Financial assistance is crucial if their progress is to be spurred on.

The aid which the Community agreed to provide under the Lomé Convention is notable not only for the amount—3559.5 million u.a.⁽²⁾ to be used during a four-year period—but also for the different forms which it takes to ensure flexibility in responding to different finance requirements; this in turn involves a division of responsibilities between the Commission of the European Communities and the European Investment Bank.

The major part of the aid is composed of outright grants (2 174 million u.a.) and special loans, for exceptionally long terms, with extended grace periods and minimal interest rates (469.5 million u.a.), both of which are handled by the Commission, through the European Development Fund,

(1) Reproduced from the EIB's information bulletin.

(2) The aid figures in this article are those resulting from the Agreement of 28 March 1977, amending the Internal Agreement of 11 July 1975 on the financing and administration of Community aid which has yet to receive formal approval from certain Member States; by way of simplification, they include the amounts specified under the decision of the Council of Ministers of 29 June 1976 extending aid to Overseas Countries and Territories linked to certain Member States.

essentially to help to finance infra-structural or agricultural development, or projects of a social nature.

A further 400 million u.a. is set aside for use by the Commission as subsidies to stabilise the earnings of countries which are heavily dependent upon exports of basic raw materials and which may find themselves hit by sudden drops in market prices ('Stabex' aid).

The EIB's role under Lomé has been spelled out clearly as being the primary source of finance for operations in industry, mining and tourism (although this does not exclude finance for various branches of economic infrastructure, such as energy supplies) where it supports projects which have a high priority in the relevant countries' development programmes.

Most of the Bank's operations are in the form of loans from its own resources—the Convention sets a total of up to 400 million u.a.—which are provided subject to the same criteria of economic viability as are applied to operations within the Community.

In accordance with its statute the Bank lends for projects which contribute either directly or indirectly to an increase in productivity; those in the production sector must appear sure to generate sufficient operating profits to cover loan repayments.

The Convention enables the loans to be provided at a lower cost than would otherwise be possible—always bearing in mind that the Bank must borrow its own funds at market rates—by specifying that, except in a few special cases, part of the grant aid (100 million u.a.) can be used by the Bank to provide interest subsidies, which as a rule amount to 3%.

EIB loans, therefore, are given more of the character of development aid, as they are subsidised, but in certain cases they are not sufficient on their own.

Often there is a need for complementary action in the form of an increase in equity capital to strengthen an enterprise's financial base and thus give it adequate borrowing capacity to contract the loans it requires.

To enable such help to be given appropriate arrangements were made under the Lomé Convention to set aside 100 million u.a.(1) a relatively

(1) As the Bank's own funds are not involved these operations do not appear in the EIB's balance sheet; separate accounts are maintained under what is known as the Bank's 'Special Section'.

Risk capital operations under the Lomé Convention

Under 1st tranche of 40 million u.a.

Cameroon: a 2.3 million u.a. conditional loan to Société Camerounaise de Palmeraies - SOCAPALM for the construction of an oil mill at Dibombari: term 20 years, interest rate 2% for first 7 years, 4 1/2% thereafter.

Chad: a 7.5 million u.a. conditional loan to the government to take up shares in Société Nationale Sucrière du Tchad - SONASUT with a view to development of a sugar complex at Banda: term 20 years, interest rate 2%.

Ghana: a 2.0 million u.a. subordinated loan to the government for taking up shares in Ciments de l'Afrique de l'Ouest - CIMAO, a major regional venture undertaken by Ghana, the Ivory Coast and Togo to assure most of the three countries' cement requirements from a large clinker works in Togo: term 20 years, interest rate initially 2%, rising to 6% when first dividends are paid out(*).

Ivory Coast: a 2.0 million u.a. subordinated loan to the government for taking up shares in CIMAO: same conditions as above(*). Acquisition of stake worth 0.25 million u.a. in Société Ivoirienne de Coco Râpé - SICOR with a view to assisting the construction of a desiccated coconut factory in Jacqueville(*).

Kenya: acquisition of stake worth 1.08 million u.a. in Kenya Furfural Company Ltd. which is building a factory for producing chemicals from maize cobs(*).

Liberia: acquisition of stake worth 0.29 million u.a. in the Liberian Bank for Development and Investment to support it in financing smaller industrial ventures(*).

Malawi: acquisition of stake worth 0.99 million u.a. in Dwangwa Sugar Corporation to contribute towards development of a sugar complex in the Dwangwa river delta(*).

Rwanda: a 3 million u.a. subordinated loan to Société des Mines du Rwanda - SOMIRWA for expansion of tin and tungsten ore mining and construction of a tin foundry: term 15 years, interest rate 2% for four years, 6% thereafter.

Tanzania: purchase of convertible bonds (worth 2.5 million u.a.) issued by Tanganyika Development Finance Company Ltd to help it to increase its support for small industrial ventures. A 4.9 million u.a. conditional loan to the National Development Corporation to help it to finance a canvas mill being built at Morogoro: term depending on plant profitability, in principle 20 years, interest rate 2%.

Togo: a 2 million u.a. subordinated loan to the government for its share in the CIMAO project; same conditions as with Ghana and Ivory Coast(*). A 3.15 million u.a. conditional loan to the government for taking up shares in Société Nationale pour le Développement de la Palmeraie et des Huileries - SONAPH which is building a palm oil mill at Agou and storage installations: term 20 years, interest rate 2%. A conditional loan of 0.1 million u.a. from block allocation made for technical assistance(*).

Upper Volta: a 1.43 million u.a. conditional loan to the government for taking up shares in Société Sucrière Voltaïque with a view to expanding the Banfora sugar complex: term 20 years, interest rate 2%; also 3.0 million u.a. subordinated loan to the company itself: term 13 years, at 2% for first 7 years and 5 1/2% thereafter.

Zaire: a 1.1 million u.a. subordinated loan to Société Financière de Développement - SOFIDE to finance expansion of cement works in Shaba: term 15 years, interest rate 5.5%; acquisition worth 0.1 million u.a. in SOFIDE's share capital to strengthen its industrial financing activities; 0.03 million u.a. in a conditional loan to the Government from block allocation to finance updated project study on an oil mill development: term 8 years, interest rate 2%.

Zambia: 0.08 million u.a. conditional loan from block allocation for market research and study concerning extension of a cement works: terms 6 years, interest rate 2%.

OCT - the Caribbean: 1 million u.a. conditional loan to Caribbean Investment Corporation (regional financing agency) to help it to acquire holdings and promote industrial and tourism ventures: term, in principle, 25 years, interest rate 2%.

Under 2nd tranche of 60 million u.a.

The Sudan: a 6.5 million u.a. conditional loan to the Gezira and Managil Textile Company Ltd. (owned mainly by farmers' cooperative) for construction of a cotton textile mill: term subject to plant profitability, minimum 11 years, interest rate 5.5%.

(*) Denotes projects which have benefited also from loans from the EIB's own resources.

new from aid, risk capital assistance, to be managed entirely by the EIB on the Community's behalf. Operations of this nature are carried out basically in the following ways.

The Bank can acquire a minority holding in the capital of an enterprise, the intention always being to transfer such interests, preferably to nationals or institutions of the ACP country concerned, as soon as this is deemed appropriate. Under the terms of its statute the EIB is excluded from taking equity participation using its own resources, but its experience in the industrial field obviously well equips it to undertake this on the Community's behalf.

In such cases the right may be reserved for the Bank to take up a seat on the board of directors in the name of the Community or to be represented in some other way, but the general principle is that of maintaining a close observer relationship rather than actively participating in the day-to-day running of a company.

Strengthening an enterprise's equity base may also be accomplished indirectly by providing quasi-capital assistance to a government or to a national development financing institution to enable it to acquire a stake itself, provided that the enterprise's activities are in one of the sectors with which the Bank is concerned and that the operation relates to new productive investments and is supplemented by further Community financing under the terms of the Lomé Convention.

In negotiating the provision of risk capital resources, the Community and its ACP partners also had in mind that such funds could be used in other circumstances, in particular where a loan from the EIB's own resources might not be considered suitable, perhaps for reasons of a country's limited debt capacity and balance of payments situation or because of factors relating directly to a project.

In the latter context it is clear that industrial investment in many ACP countries presents added risk elements.

Markets may be small and difficult to assess. It could well be that no network of established enterprises exists to provide trained labour or skilled management. Stocks of spare parts or intermediate products required in a manufacturing process may inevitably involve difficulties. The infrastructure 'back-up'—transport facilities, telecommunications, energy supplies—may be limited.

The Community's concern is obviously to use finance to the best possible effect, concentrating on projects which seem to offer the greatest advantages and best chances of success, but the conditions in which some investment projects are undertaken demands a very supple approach as far as the financing is concerned.

Risk capital resources can be used, therefore, to provide quasi-capital project finance in the form of:

a) subordinated loans which are repayable only after priority loans have been paid off;

b) conditional loans which are repayable only after fulfilment of certain conditions, indicating that the project has overcome its teething troubles and has achieved a predetermined level of profitability.

Assistance may also be given for financing specific preinvestment studies or as aid to enterprises (technical assistance) during the start-up period of a project.

Further 60 million u.a.

In view of the trial nature of the risk capital assistance and to take stock of how it tied in with industry's requirements in the ACP countries, a limit of 40 million u.a. was set for the first two years.

At this point a joint report was to be submitted by the Commission and the EIB to the Council for decision on what, if any, further amount should be made available to continue such operations; in the event, the experience has proven to be most satisfactory and the full remainder of 60 million u.a. has been released.

The first 40 million u.a. went in 17 operations concerning 13 African ACP countries (38 million u.a.) and the Caribbean-OCT (1 million u.a.); the remaining 1 million u.a. was set aside under a blanket authorisation for financing studies and technical assistance, on a case-by-case basis.

Over 70% of the total funds were used in support of investment in countries which are listed among the least developed of the 53 signatories of the Lomé Convention.

Approximately 35 million u.a. went directly towards setting up 11 industrial projects (agro-industrial complexes, cement, textiles, chemicals and tin/

tungsten mining and processing) which involve a total capital investment worth some 420 million u.a. plus

— an estimated 10 000 jobs;

— an annual increase in value added of about 75 million u.a.;

— additional foreign exchange earnings in the region of 50 million u.a., per annum, after allowing for transfers abroad; and

— an increase of about 20 million u.a. per year in Government revenues.

Apart from the 1 million u.a. reserved for studies and technical assistance, the remainder relates to finance provided to national development finance companies to enable them to help small and medium-sized ventures.

Cooperation with the development finance companies is regarded as very important by the EIB. Not only do they represent a channel for efficient lending to small local enterprises—they are in daily direct contact, able to assess risks and prospects from close up—but they also perform an important function in developing the financial sector in the countries concerned.

From the 60 million u.a. released for use during the remainder of the Lomé Convention, the EIB has so far used 6.5 million u.a. for industrial investment in another African ACP country (see box for list of all risk capital operations to date).

. * .

Although a relatively small part (about 3%) of the total development finance package for the Lomé Convention countries and the OCT, risk capital assistance has proved to be a practical, sometimes even indispensable facility.

The different forms which it can take, the scope for tailoring the terms and conditions precisely to suit the nature of each individual project, often in conjunction with a loan from the EIB's own resources, make it possible to meet widely varying needs. Indeed, were such financing possibilities not to exist it is debatable whether some projects could go ahead, at least without delays or substantial modifications.

Many of the projects currently under appraisal or in the pipeline concern ACP states which have not yet attracted Bank financing; many of them belong to the least favoured category. □

GUINEA-BISSAU

“European aid has been one of the most worthwhile contributions to our development campaign”

Luiz Cabral, President of Guinea-Bissau



President Luiz Cabral at a public meeting

Guinea-Bissau, recently independent after a decade's fight for liberation, is poor in resources and poor in cadres. But it does have a small élite of leaders whose culture and devotion to the national cause constitute major factors in the country's development. President Luiz Cabral describes various aspects of the organization of this young state, its resources and its future relations with the EEC.

► Your country recently became independent after a long, difficult and ultimately victorious struggle. During the 10 years it lasted, one figure was dominant in the eyes of both Africans and Europeans, someone you knew

well, Amilcar Cabral, your brother. Would you describe him and sum up his main ideas, those which underlie your own action?

— First I should like to express my pleasure at having the opportunity of talking to representatives of the press of the countries of the EEC, with which cooperation is extremely fruitful as far as our development is concerned. It is very difficult for me to talk briefly about Amilcar. Not only was he the leader of our national fight for liberation, but he was my brother and we were always very close, first as students and then as fighters. But one thing I can say: what marked Amilcar most was his humanism, the same humanism we find in our freedom fighters. It was this that

enabled him to prevent hatred appearing in our ranks. He led us into a fight for independence and peace without ever mixing Portuguese colonialism with the Portuguese people, with whom we wished to have links of friendship and cooperation.

Amilcar created a new type of man; even after his death this enabled us to go on fighting as intensely as before and to call a halt to the war over the whole territory within 24 hours once fascism in Portugal was overthrown and the conditions were right for negotiations with the Portuguese government. In Guinea-Bissau, there were no reprisals after the hostilities, even against compatriots who had fought for the Portuguese. This created a situation that was conducive to national harmony via the integration into the civilian population of those who had fought with the Portuguese army or even joined the colonial militia. About 17 000 Africans had joined the Portuguese military and paramilitary forces, which gives you an idea of just what we have achieved in four years. And it was Amilcar's personality and humanism which made it all possible.

Organization of the new state

► Since independence, your country has been headed by a Council of State which you preside. Then there is the People's National Assembly and just one party, the PAIGC. The PAIGC operates in both Cape Verde and Guinea-Bissau: how did this come about? And what part does the party play in the development of your country?

— First of all, I should like to say that we have an executive body here, the 19-strong Council of State Commissioners. The State Council, a collective body with 15 members, has certain prerogatives (held by the president of the republic in other countries) as well as responsibility for legislation between meetings of the People's National Assembly. It is true that there is only one party for Cape Verde and Guinea-Bissau. At its head are people who led the freedom fighting in Guinea-Bissau — armed fighting for national liberation and underground fighting in Cape Verde. It was a nucleus of nationalists, led by Amilcar Cabral, who analyzed the situation in Guinea and Cape Verde and had the idea of a complementary

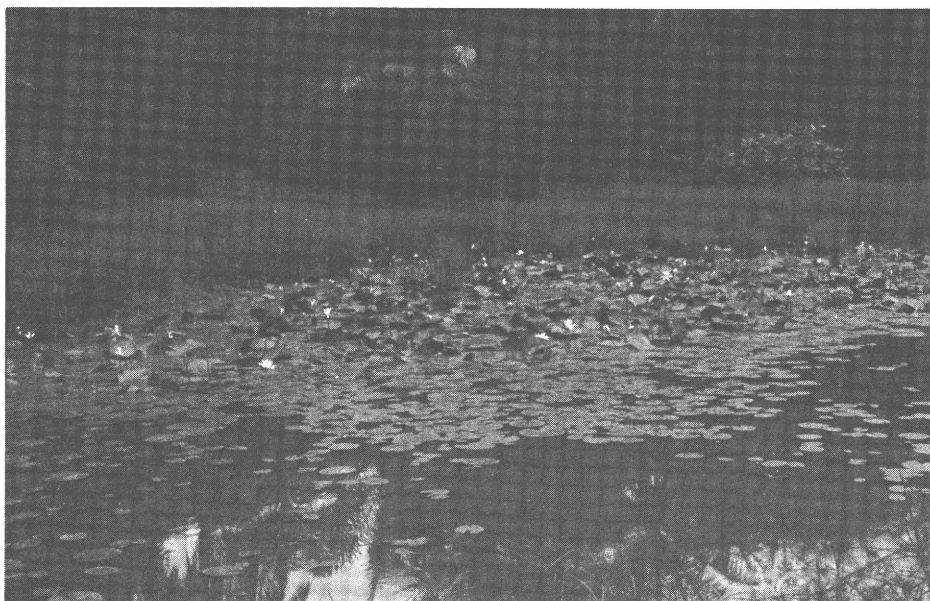
approach to the struggle. Look at the history of these two countries and you will see that they had a single government until 1879 and it was only then, a century ago next year, that they were separated. So we analyzed this complementarity of interests and set up the PAIGC for the independence of Guinea and Cape Verde. Now we have two free, independent countries; our third congress last November geared party structures to two sovereign countries and analyzed the conditions for the move towards unification.

The party's role is a determining one. The people, the militants, are organized according to the region of Guinea or Cape Verde in which they live and they have been mobilized to provide support for the objectives laid down by the party. We think the party guides both states and both governments. But the party has aims beyond the aims of the governments and today we have the problem of uniting the necessary forces to continue the march towards the party's objectives. We therefore have to prepare the people of Guinea-Bissau and Cape Verde, make them aware of the interest of unification, point out all the complementarities of the two countries and demonstrate the need to join together. With our combined population of 1300000, we will be much stronger united than divided.

Relations with the other countries of west Africa

► *Your country is a member of ECOWAS. How do you see its relations with the other countries of west Africa?*

— One of the first things we did after independence was in fact to take part in the negotiations leading up to the signing of the community's protocol. Our relations with our neighbours Guinea and Senegal are excellent and we have joint committees which meet every year. However, as far as trade is concerned, it is always difficult to find the complementarities and establish worthwhile relations. In our sub-region of Africa, the problem is to create this complementarity and reap all the benefits of a vast market like ECOWAS. People, particularly the heads of state, must be convinced of this. As far as we are concerned, I can say that to achieve economic unity on this scale we would even be willing to drop certain prerogatives of our sovereignty, since this is an objective which we feel to be of great interest to our people.



Guinea Bissau also has areas of marshland ...



... which could be drained and turned into excellent farmland

Guinea-Bissau wants Angola and Mozambique to join the Convention

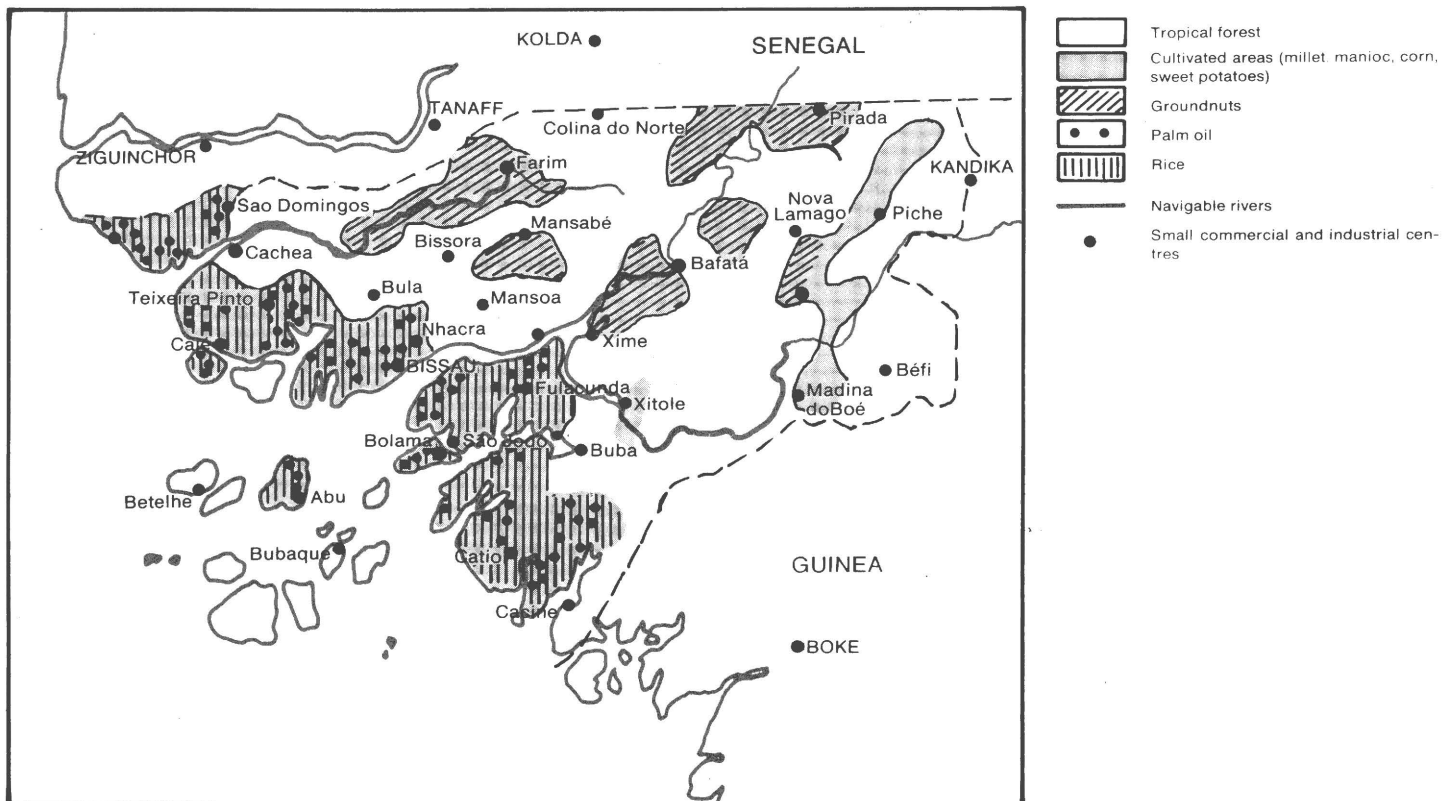
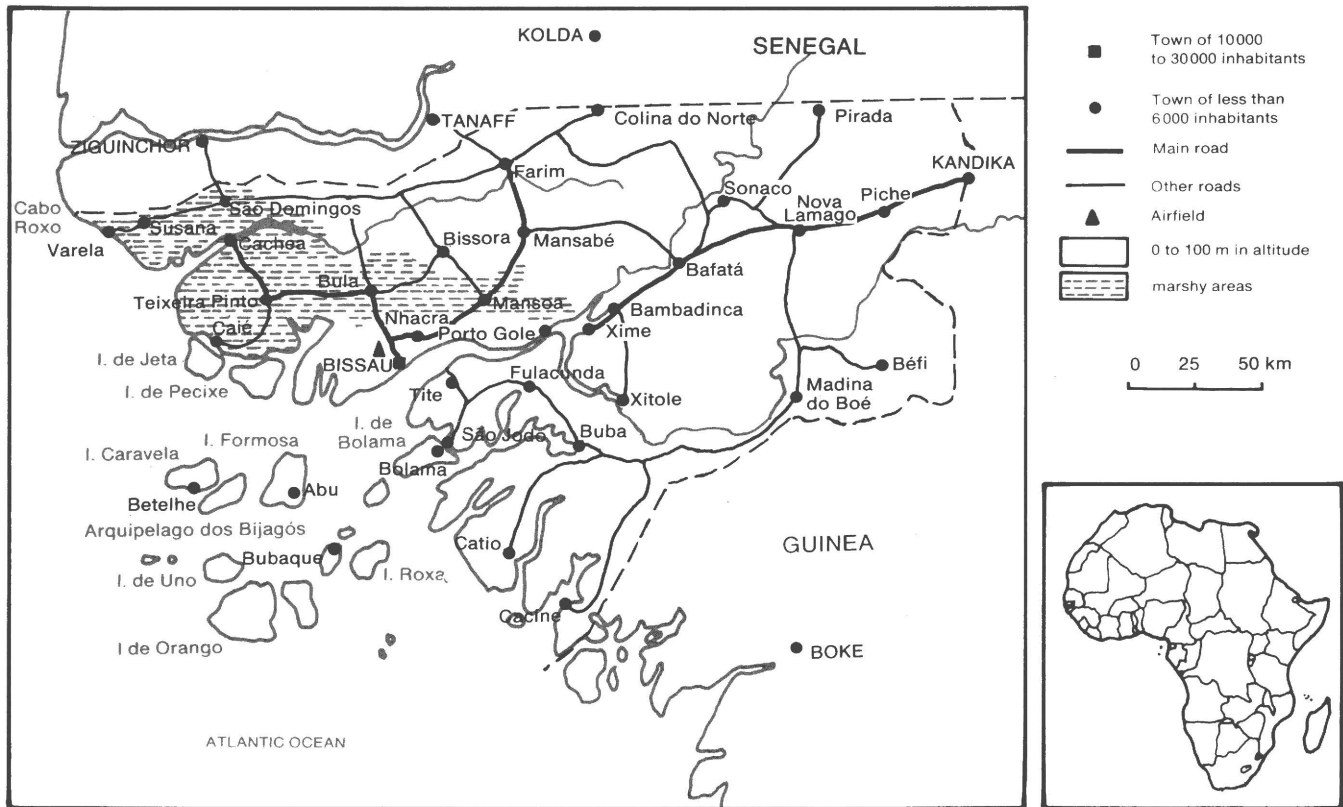
► *History and language have created special ties between your country, Mozambique and Angola. A Mozambique delegation was in Brussels recently. What do you think of the prospects of one or other of, or perhaps both, your countries participating in the new EEC-ACP convention for which negotiations have just started in Brussels?*

— Of course, in spite of the ties of friendship and solidarity, these are

sovereign countries. They are also countries with very complex problems. As you will realize, Angola has not so far known the real meaning of the word peace and Mozambique too has grave problems with its racist neighbours in Rhodesia. I think these countries will watch how the ACP countries get on and I think it will be a good thing if one day they can join with other African countries to defend the joint interests of our peoples in our negotiations with Europe.

► *So far, your country has no economic plan as such. I should like to know why it hasn't. And I should also like to know if you intend to produce such a plan in the future which might*

GUINEA-BISSAU: PHYSICAL AND ECONOMIC FEATURES



help you define your targets more clearly and better incorporate external aid in your development schemes.

— We have no development plan, it is true, but you have to see what conditions were like when we took over. There had been 12 years of fighting for a start. And when we had completed liberation, we had no statistical or other data. If you are to plan, you need to know about the country and have all the right data. So for

years, our problem was to create the conditions in which a plan could be drafted when the time came. We want a planned economy and we shall have one.

But we couldn't just stand back and wait for the day we had a plan. For three years we tried to use every opportunity to take steps, small and sometimes hesitant though they were, to remedy the catastrophic situation inherited from the colonial era.

► So, on independence, you were faced with a very precarious situation. Almost everything needed doing. This is perhaps another unusual feature of your country. In the last two days I have had the opportunity of going to a village meeting where there was a crowd of people round a score of delegates from different villages. They concentrated on one topic: food. What is the food supply situation, especially as regards basic staple foods?

Cooperation with the EEC as of June 1978

(a) Indicative programme (16 July 1976)

Amount: 20 million EUA (including 5% delegation costs)

Breakdown:

- agriculture..... 7 million EUA (35%)
- social infrastructure 4.2 million EUA (21%)
- economic infrastructure..... 7.2 million EUA (31%)
- miscellaneous (pre-investment studies, technical assistance, trade promotion schemes, microprojects, small & medium-sized businesses) 1.6 million EUA (8%)

(b) Implementation of indicative programme

— Agriculture: four projects

1. Supply of means of agricultural production
position — committed 162 000 EUA
2. Development of cotton growing
position — committed 6 000 000 EUA
3. Study for development of cotton growing
position — committed 200 000 EUA
4. Fruit production on Bolama island
position — undefined, amount unspecified 500 000 EUA (1)
5. Hydro-agricultural project:
unspecified 435 000 EUA (1)

— Social infrastructure: three projects and programmes

1. Construction and fitting out of hospitals and supply of medicines and equipment
position — committed 1 850 000 EUA
2. Construction and fitting out of schools at Farim and Catio
position — committed 1 000 000 EUA (2)
3. Study grants
position — committed 980 000 EUA (3)

— Economic infrastructure: three projects

1. Supply of port and river facilities 3 850 000 EUA
position — not committed;
financing proposal scheduled for July 1978

2. Supply of three ferryboats 1 080 000 EUA
position — committed

3. Bambadinca-Xitole-Quebo road 2 200 000 EUA
position:
(1) study of trunk road (200 000 EUA)
committed
(2) works (2 000 000 EUA)
not committed

— Miscellaneous: only one project so far:

- Study for a southern regions development strategy 1 000 000 EUA
position — not committed

(c) Summary of cooperation

1. Commitments from the indicative programme
These total 11 472 000 EUA, i.e. 57% of the indicative programme. In July 1978, subject to approval of the last project, total commitments should amount to 15 322 000 EUA (76%).

2. Stabex payments
Guinea-Bissau received 5 069 313 EUA (for groundnuts & palm nuts) as Stabex payments for 1976.

3. Food aid
Programme 1976 5 000 t cereals (delivered)
500 t milk (delivered)
350 t butteroil (delivery in June)
Programme 1977 3 000 t cereals (delivered)
100 t milk (delivered)
200 t butteroil (scheduled for delivery, June 1978).
Programme 1978 7 500 t cereals (not delivered)
610 t milk (not delivered)
175 t butteroil (not delivered)

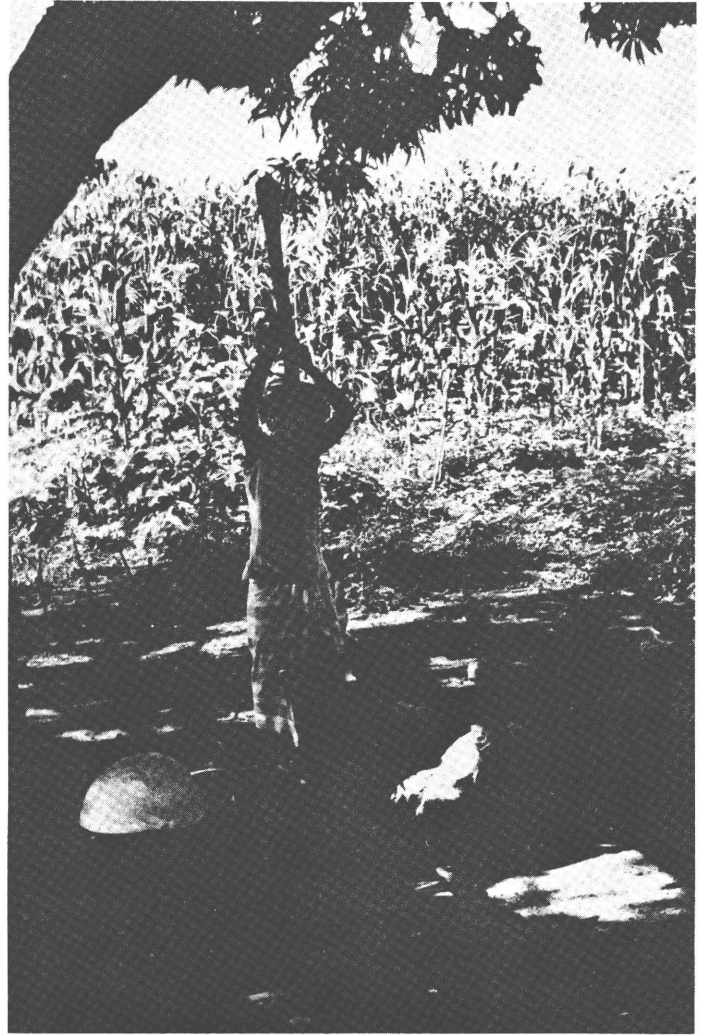
(1) According to indicative programme.

(2) Plus 100 000 u.a. training programme (see below).

(3) Less 100 000 earmarked for school project (see above).



Fruit growing, such as papaw, is one of Guinea-Bissau's potentials



Maize is a basic food crop for the country

— We are convinced that our country will be producing enough food for its own needs in the near future. We are sure of this. At the end of the war, in 1974, we had a food shortfall of 40000 tons of grain, but in 1977 we only imported 10000 tons. These figures show the progress we made in three years. But last year we had an exceptionally severe drought and our people, who had no reserves, were unable to cope. So we called on the international community, which gave us very substantial aid. Many countries, including those of the EEC and the Community itself, gave us food aid. The three months between the beginning of the rainy season and the first harvest can sometimes be very difficult, as they are this year. But grain is due to arrive and we shall be doing all we can to give the people the food they need. We think that our people can work to make up our food shortfall, provided we have rain. So the problem is to give them the means of working and to avoid what we think are the exceptional problems we have had this year.

Diversifying food production

One of our government's greatest ambitions is to achieve self-sufficiency in food. It is quite possible. We can produce a lot of rice of our own every year. We are introducing selected maize and the seed has already been used. We are now going to diversify a good deal. The farmers used only to grow groundnuts but in the south we now have potatoes, beans, maize, rice and, for the first time this year, soya. So, if they diversify, even if rainfall holds one product back, it may well be adequate for another.

Steadying the balance of payments

► *Your country has a fairly large trade deficit. This is understandable enough in developing countries, partly for the reasons you just mentioned, when there is a temporary need to import food. It also happens because a*

developing country needs to import capital goods, energy products and so on. And then there is the fact that your exports, groundnuts and a little timber, are still fairly underdeveloped. Do you think you can gradually do away with, or at least restrict, your trade deficit?

— In 1974, during the first year of independence, we had absolutely nothing to export and in 1975, we only covered 8% of our imports. In 1976, we covered 19-20% and, in 1977, the figure rose to more than 50%. We had the drought last year, of course, but we are making a huge effort at least to maintain exports at last year's level. This shows that there has been considerable improvement.

In the not too distant future, we shall be able to balance our trade, when we are able to make a proper job of exploiting and exporting our timber. We have problems, as we have to plant trees as well as fell them, but we do have a programme for this and we can go on cutting for some years to come without endangering the future of our forests.

Then there is fishing. Our waters are well-stocked and we have done little to exploit them so far, but we hope that, in the coming years, fish will be a more important export than groundnuts. With groundnuts, palm nuts have picked up again this year and I think we will manage to export 12-15000 tons in 1978. We want to make up for the drop in groundnut production with palm nuts. Before the war, we exported a lot of palm nuts, but during the fighting, the harvest plummeted, first because we could not export and the people stopped growing them and second because the Portuguese did not want to go into the brush and get them. So for 12-15 years, people lost the habit of harvesting palmnuts. Our 25-year olds have never done it. But things are getting back to normal again and grinders have been bought. So, with groundnuts, palm nuts, fish and timber, I think we will be able to cover our import requirements in the coming years.

Then we have resources that have not been exploited. Bauxite, for example, which is bound to be a success. Our country is a viable one and we shall do our utmost to see that it is a properly balanced country which lives from its own means, but which also seeks foreign aid, in the form of both grants and loans, to develop.

► *The EDF indicative programme includes 20 million EUA for Guinea-Bissau. Overall, what is your opinion of European aid to your country?*

— European aid has been one of the most worthwhile contributions to our

development campaign in our early years of independence. The EEC-ACP negotiations were already under way when we achieved independence and we immediately decided to take part ourselves. So, we were one of the signatories of the Lomé Convention and now, three years later, experience shows we made the right decision. For us, cooperation with the Community has primarily involved the Community helping us with our development and it is one of our biggest donors at the moment. We also receive bilateral aid from the Member States of the EEC. What we want is to strengthen this cooperation by forging economic links that are also worthwhile as far as the EEC is concerned. This is one of our aims, particularly since our comrade Amílcar Cabral always said that "one-sided cooperation soon becomes charity and charity never made anyone happy". This is why in the coming years we aim to find worthwhile points for cooperation with the Community which are beneficial to both sides. We have discussed bauxite, phosphates and oil with certain countries. With France, now we have jointly-owned companies in the fisheries sector. We are grateful for the aid we have had from the EEC, which concentrates on the key sectors, of infrastructure, transport and agriculture, to equip the country. We are convinced that this ACP-EEC cooperation is useful and relevant.

► *In addition to the amount under the indicative programme, Guinea-Bissau got 5 million u.a. for palm nuts and groundnuts under Stabex for 1976. What do you think of this original*

system, which the Lomé Convention brought in?

— Countries like ours are very much in favour of a system which provides such practical help for the balance of payments. The originality of the Lomé Convention is the responsibility which the members of the EEC take for the instability of the exports of developing countries like ours. It has been an extremely valuable contribution. We are not so well placed this year, as Stabex concerns us very little. But, from another point of view, I feel we are in a very privileged position because I think a country should not count on Stabex payments. It should develop its exports so as not to need them. This proves, as I said, that we made remarkable progress with our exports last year.

► *The formal opening of the negotiations for the next EEC-ACP convention was held in Brussels at the end of July and the discussions proper start in September. Are you planning on concentrating on any particular improvements to the present Convention or will you also be making suggestions for new areas?*

— Corrections can always be made. The Lomé Convention must develop. It can be improved and we must improve and alter it at every stage. The negotiators must work to improve the Convention and increasingly adapt it to this quest for a new international economic order that all developing countries hope to see. □

Interview by
ALAIN LACROIX

A rural development project in Guinea-Bissau

by Jacques Moineau(*)

The development of cotton-growing and the intensification of crop rotation (Bafata and Gabu areas)

The project is a multi-stage one:

— An EEC-ACP programming mission in July 1975 defined the possibilities of agricultural projects.

— The authorities and the Commission delegation identified and set up an agricultural development project based on rice and cotton production, along the lines of schemes run in Senegal.

— In 1976/77, the EDF financed two expatriate agents who ran an agricultural test campaign in the field, with the help of the authorities, under the auspices of the state commissariat for agriculture and planning. The products

in question were rice (testing and observation) and cotton (143 ha run by 165 peasant farmers in 28 villages).

This test period was an opportunity to produce a project to develop cotton and intensify crop rotation (rice, food crops and groundnuts).

The 1977/78 agricultural year was also the first year of the three-year project, during which a cotton, food crop (rice), groundnut rotation system is gradually to be introduced.

The project involves popularizing agricultural techniques among any farmers interested, with a view to developing production.

So the main aim was to establish

(*) Agronomist and project leader.

| | Target | | Achieved | |
|------------|----------|------------|--------------|------------|
| | Area | Production | Area | Production |
| Cotton | 1 000 ha | 1 200 t | 813 ha | 807 t |
| Rice | 150 ha | 150 t | 30 ha | 30 t |
| Groundnuts | 1 000 ha | 1 100 t | not followed | |

well-tended crops and ensure reasonable yield and production.

During the 1978/79 agricultural year (year two of the project), the programme was maintained (3 000 ha cotton, 1 000 ha rice and 3 000 ha groundnuts), but targets have been revised as follows:

- Crop rotation to be introduced directly, which assumes continuity, and simultaneously one ha rice and one ha groundnuts for each ha cotton.

- Popularization of agricultural techniques geared more to demonstration, information, involvement of villages and farmers and to "extension services and proper completion of tasks by the farmers".

- Provision of much more animal-drawn tillage equipment, if possible via village structures.

- Intensification of training for agricultural monitors to prepare them to be village advisers.

- Diversification and coordination of development schemes.

Priorities too are different. The food crops (particularly rainy season and lowland rice) are considered as top priority, and there is new emphasis on the regionalization of the project, i.e. adapting it to each region (Bafata and Gabu).

Within the regional structures, this will require better coordination with the administration and with other projects. This also means extending the geographical area covered by the project to administrative sectors and sections, although without involving all the villages or all the farmers.

We are no longer trying to get people to produce cotton, rice or groundnuts, but to define the needs of the villages and the regions for which we can provide an answer, whether through these crops or as regards providing equipment or helping with stockrearing, either technically or via the means of production, and without losing sight of either the objectives or the programmes.

We want to get everyone involved in their own development as they have defined it, so as to increase opportunities, activities and, quite simply, work and achievements, so as to make a lasting improvement because it is what the people concerned want.

Launching and following up a development project

The EDF project to develop cotton and intensify crop rotation is not a model. It can only be one of many examples, an attempt that is still not certain to succeed.

The starting point was:

- The need for a sustained agricultural campaign in the north of the country.

- Outlining a project based on a Senegalese experiment to meet the wishes of both the government and the state commissariats for economic development, agriculture and planning.

- EDF financing.

- Setting up a team supported by CFDT, a French textile company.

The first thing was to demonstrate to both the authorities and the farmers that it was technically possible to use the production to make the project gradually self-financing and thereby to enable it to continue and develop. This was done during the period of assessment and stage one of the project.

Cotton, the only crop the previous year, has to finance the means of production and part of the operating costs (transport, installation, marketing and production) for a further year, with a programme two or three times as large.

Now this production, and others which will ensure that the project can gradually finance itself, must be main-

tained and developed. The crops in question are those which can be sold on the international market so as to enable the government to release its own resources to purchase input (fertilizer, pesticide and agricultural equipment), and gradually, village equipment (scales, pumps, mills, motors, etc.) as well. This agricultural development project is no longer aimed at the most efficient production of groundnuts or cotton, or even at growing them at all. Its framework of reference (i.e. its terms and means of intervention) is the improvement of growing techniques, intended to lead to higher productivity. Its means of implementation are the installation, distribution and demonstration of the factors of production. Most of these factors of production, which are vital to development, are not to be found in Guinea-Bissau. It does not seem a good idea for either the country or the farmers to be financed by external sources for a long period.

But the villages and the farmers must also be enabled to have greater control over their own development. This means that they must have greater control over the means of production, their techniques of production and their production itself, so as to have greater effect. This must be achieved by seeking to meet the farmers' own wishes (and the farmers can only express these wishes after we have had several meetings and really worked with them). Then it is easy to reach far more villages and farmers.

By adapting the methods and means of intervention to the demands of the villages and the farmers, instead of trying to adapt the villages and the farmers to our programmes, we can train even the most backward and least capable workers, those who are often in the majority and would otherwise be in no position to imitate the pilot farmers, having to content themselves with becoming mere labourers for the latter or with migration to the towns.

By getting the farmer involved in his own development, we enable him to put his knowledge into practice and to work according to his possibilities.

When schemes really involve the peasants, their potential is greater as every individual makes an effort. We aim to capture the interest of the farmers and the villages by basing things on their experience and their needs rather than forcing them to accept an alien production system which inevitably overlooks individual and village constraints. □ J.M.

GUYANA

A double bet: economics and politics

Guyana is on the Atlantic, on the north-east coast of South America. But it belongs to the Caribbean just as surely as Britain, an island, belongs to continental Europe.

The open-minded visitor who arrives in Georgetown wanting to judge for himself the achievements of this little country (see map), to which the European press devotes many, not always enthusiastic, columns, is struck by the contrast between what the European press says and the reality. He sees a country laying a double stake on the future—its economic and social development and its political system.

The economy

Guyana's economy is based on rice, sugar, bauxite, fish and timber. These five products, plus a considerable amount of rum and a good deal of cotton and gold, are its main exports.

Rice. In 1908, Guyana exported its first ton (or ton and a half, to be precise) of rice. Now, 70 years later, it is the Caribbean's biggest rice exporter, with 110 000 t of its total 200 000 t going abroad in 1977. Rice is grown by almost 45 000 family smallholders, using highly mechanized modern methods and large amounts of fertilizer.

The trend in the production curve is upwards. Between 1975 and 1977, for example, production rose from 180 000 t to 200 000 t thanks to close cooperation between the government, the Guyana Rice Board (GRB), the area administrators and the farmers themselves. But, as the minister of economic development says, these results are also due to the effect of Guyana's "cooperative socialism" on the rural population (see interviews with the ministers for economic development and agriculture).

Guyana also has a rice research centre which aims, among other things, to establish a strain which will yield both brown and white rice. This has not been achieved so far but the Guyana research workers hope to succeed.

Sugar. The sugar industry is one of

the country's most dynamic. This 210 000 km² (83 000 sq. miles) country is the biggest sugar planter of all the Commonwealth Caribbean. The producers are properly organized and so reap the direct benefit of the income from their products. The climatic conditions are also favourable for this crop.

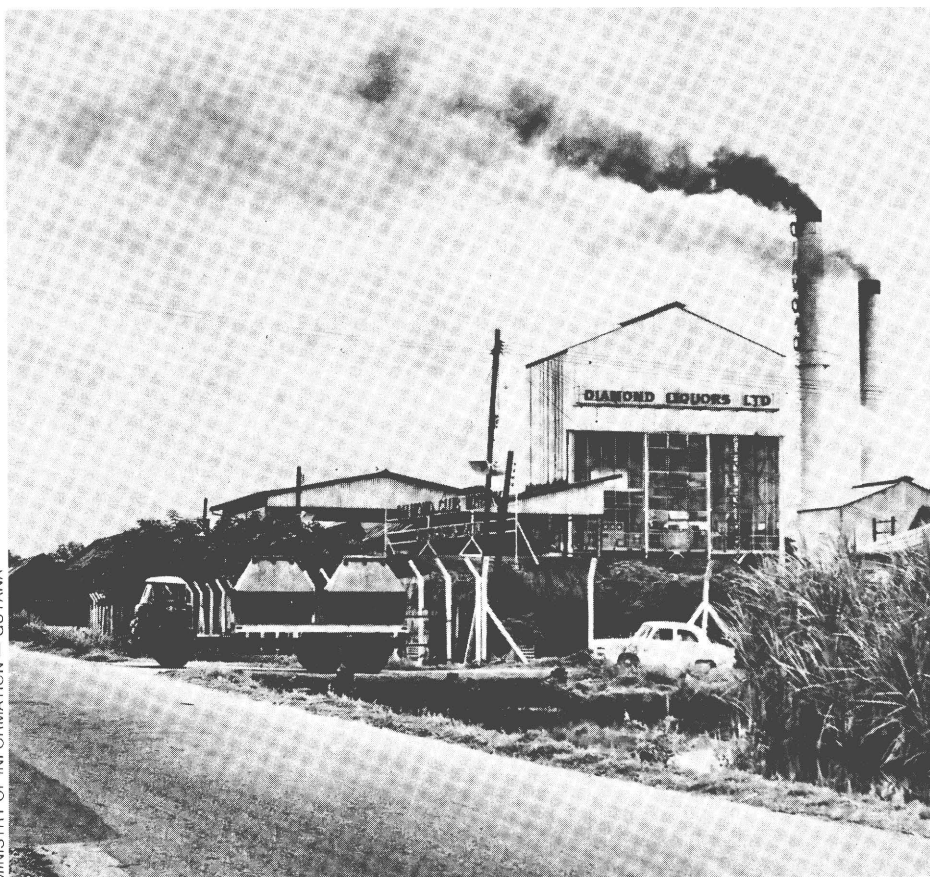
The sugar industry is managed by the Guyana Sugar Corporation which, as director Harold H. Davis says, was set up after the government bought out all private interests "to guarantee employment, better working conditions, better pay and dignity for the sugar workers". In spite of the drop in export prices and the instability of the international markets, the sugar industry is one of the mainstays of Guyana's economy. This is why the government is particularly concerned with the solu-

tions which the various agreements, Lomé included, have put forward for the problem of sugar prices (see interviews with the PM and the foreign minister).

Bauxite. Although Guyana is building its economy on food and agriculture, it is, at the same time, making an effort with its heavy industry, centred on bauxite, of which Guyana is a major producer (bauxite is the second export product after rice). In the general interest of the people, and the country, and in order to control the economic destiny of the nation, the state took over bauxite production by buying out the whole of the private sector in 1970, in much the same way as it did in the sugar sector. The Guyana Mining Enterprise Ltd (Guymine), which is now in charge of the bauxite sector, has 19 000 employees in the Linden and Berbice mines. Most upper and middle management staff are now Guyanese, whereas before nationalization only 100 of the 750 had any intermediate-level technical training. "Our cadre training policy has been one of the most successful since nationalization", Malcolm M.F. Johnson, one of the Linden team, said. "We have an extremely



Guyana is the main producer and exporter of rice in the Caribbean



Sugar is one of the country's most dynamic industries

liberal training policy", he went on. "Our engineers are not forced to come back to Linden after their training abroad, although nearly all of them do because of the working conditions we offer". At Linden, which produces more than 600 000 t bauxite every year, young Guyanese staff are attracted by the responsibility which the posts offer. The economic conditions are very competitive in this sector.

Forestry and fisheries. The fisheries sector is of great importance to the economy of Guyana, which has well-stocked waters. The fish/shrimp industry is fairly well developed. In spite of a shortage of boats, which means that the Georgetown processing plants are sometimes only working to 50% capacity, international cooperation with the Japanese and current financial aid from the EEC will ensure the rapid growth of an industry which is increasing its export trade with the USA and Japan. Forestry is also important. Most of Guyana is covered with forests containing the most sought-after types of wood in the world. The government is now developing the timber industry. The Bartica saw mills produce more than 3 000 logs per day, most of which are exported to the USA and Canada.

In addition, the government is developing other sectors like cotton, gold and, of course, food products.



Linden bauxite mine

Guyana produces around 600 000 tons of bauxite a year

Social development

Now that the country produces enough food of its own, the government is concentrating on the social sector and is striving to provide free schooling, vocational training and, most important, decent housing for all its citizens. The aim is to give everyone enough to eat (this has already been achieved) and somewhere to live. The government's housing policy is an undeniable success. Under the housing scheme, every citizen of Guyana has, with financial help from the state if necessary, individual accommodation to suit his needs. This system, unknown elsewhere in the Caribbean, has enabled many Guyanese to obtain housing which, compared to standards in other countries, is of fairly high quality.

These economic and social achievements are part of the Burnham government's twofold drive for development, for Guyanese by Guyanese.

Identity of the Guyanese state

The other aspect of this economic and social drive is a political one.

On 10 July, PM Forbes Burnham's government held a referendum on providing the country with legislative and

executive institutions which are in keeping with its economic ambitions and desire for independence. It dominated the political life of Guyana for several months and was strongly attacked by the opposition parties, the People's Progressive Party (PPP), which is further to the left than the ruling party (PNC), and the United Force (conservative). But, although there was inevitable opposition, the electorate came out very much in favour of a change in the constitution.

Under the new constitution, a number of measures will be introduced or strengthened. In addition to equal social and public rights for men, women and children and protection of the rights and interests of all Guyanese living abroad, the new constitution reasserts the rights to life, to freedom of the individual and to protection against inhuman treatment. It reasserts the right to the protection of private and economic property and to privacy in the home. It continues to provide freedom of expression and association, freedom of religion, freedom of movement, protection against racial and political discrimination, etc.

But, more important is the introduction of the right and the duty to work. The individual has the right to work but is not forced to do so. And it is the duty of the state to ensure, with the participation of everyone in the economic and social life of the country, that all citizens have decent housing.

The state executive

The main change here is the introduction of a presidential system "along Tanzanian lines", as information minister Shirley Field-Ridley said. The reason for abandoning a British-type parliamentary system for a presidential one is, the PM says, to lighten the duties of the state executive organ (also cutting costs) and make the job of the head of state, currently a symbolic one, an operational post.

With this legislative and political reform, the Georgetown authorities think the Cooperative Republic of Guyana is making an economic, social and political drive for its future. They hope its success will counter criticism at home and abroad. This criticism, which is all the more severe in that Guyana and Jamaica are the only countries in the region not in the traditional mould, is most commonly expressed thus: "You have socialism, we have the money. You must choose".

The government feels these criticisms are partisan and unrealistic, considering that the objective of development will remain at a far remove so long as the basic needs, food, housing, health care and education, are not met.

□

LUCIEN PAGNI

"Better terms for the developing world do not mean a diminution of wealth or comfort for the developed world"

Prime Minister Forbes Burnham

In the interview that follows, Prime Minister Forbes Burnham outlines the political and economic situation in Guyana today. His country is and intends to stay a pluralist democracy.

Mr Burnham also explains the importance to Guyana of cooperation in CARICOM and with Surinam and talks about the international relevance of the diversification of the country's economic relations in accordance with its policy of non-alignment.

The PM emphasizes that the ACP countries must remain united if they are to negotiate and deal with the EEC, which is itself "a united group" facing them.



Linden Forbes Burnham
Prime Minister of Guyana

► Prime Minister, Guyana is self-sufficient in crops, but the country is facing some difficulties in its balance of payments. What are the reasons for that situation?

— I think the fact of the matter is that we are disadvantaged by the inflated prices we have to pay for the things we import. For instance, we are self-sufficient in crops but we have to import the tractors to cultivate the land. Those prices have risen considerably between 1973 and now—the price of tractors has risen by over 300%. And then, of course, we suffer from the high oil prices; we are not producers of oil. At the same time, one of our major exports—sugar—has fallen considerably on the world market; the world market price right now is nearly £60 a ton less than the cost of production. All these things militate in favour of a troublesome situation. Therefore we introduced a regime of cutting back on luxury and unnecessary items in the early '70s and more recently there have been further cutbacks, for instance, on motor cars. But we had been able to curb to a very large extent what I call the import proclivity which one finds in so many developing countries, especially ex-colonies of European powers.

(1) G\$ 2.3 = US\$ 1.0.

► How serious is the cost of oil in your imports?

— In 1973 our oil bill was G\$ 40m (1) and in 1977 it was over \$ 200m. That gives you an idea of the escalation in oil prices, and I gave you earlier some idea of the escalation in prices of industrial goods.

► For the first time in 1977 sugar production seriously declined in Guyana. What are the main problems with cane production in particular, and cash crops in general?

— As far as sugar is concerned, production last year was lower than had been programmed because of a major strike. But one wonders whether it was really such a great loss, because, in spite of that, we were able to reach our EEC quota and also sell to some preferential markets. It would have meant we would have produced so much more to sell at so much greater loss. In any case, production this year, so far, has been good. We have two crops, the first of which used to be called the spring crop and the second the autumn crop. The spring crop, or first crop, is just over, and the returns are pretty good—just 4 000 tons less

than the highest record—and for a number of reasons we expect that the second crop will be equally good. the strike last year was a political strike and I think the political party that called it got the message that we are not going to tolerate that sort of thing. There is, of course, a right to strike over industrial matters, which we will always preserve, but we as a government are not going to stand by and allow a political strike to succeed. There are 11 sugar mills; three of them surpassed their target, four, I think, were near their target and the rest were a little further away from the plans.

► *Sugar is the axis around which the Guyanese economy revolves...*

— I wouldn't say so. So far as export commodities are concerned, sugar is very important, but bauxite is equally important and that too was hit to some extent during the past year. We are the world's biggest producers of calcite, which is a refractory form of bauxite used for lining steelmills. So when the steel industry buckled, our exports of calcite also buckled, though we were able to export the same amount of alumina and raw bauxite.

Our main exports are bauxite and bauxite derivatives, sugar and rice. Actually, we are now the largest sugar producers in the Commonwealth Caribbean and Pacific. Jamaica and Trinidad at one time were bigger producers. We also export timber for the building industry, gold and small quantities of diamonds.

► *What have you got out of the Lomé Convention that has really proved useful?*

— We do normally get a price under the sugar protocol which is remunerative—it is somewhere around £220 a ton, which gives us a margin on production. So that has been beneficial, though we were particularly disappointed by the fact that this year we are only going to get an increase of a fraction of a unit of account, or something like that. But then, we don't export all our sugar to the EEC. That only accounts for about half our exports. The rest we have to export to other parts of the world. We do not enjoy the generalized system of preferences in the United States for instance. We export some to Canada, on which we get a bonus or something like that, and some to China, where we get a percentage above the world price.

► *So you think the implementation of the protocol is not satisfactory?*

— Put it this way; looking at the world prices at the moment, it looks good—but it could have been, and



The Non-Alignment Monument in Georgetown

"We are not attached to any bloc"

should have been, much better. Although it gives us a margin, it doesn't give us a sufficient margin for reinvestment in the economy. That is one of the points I urged in Jamaica in 1975. When the industrialized countries talk about a fair return they only mean a margin, a profit. A marginal profit is not enough. For development you have to get a further margin, to reinvest in the economy of your country, which I think is a superior alternative to being a mendicant, always begging.

► *The EEC countries have to take into account the prices they can offer to their own producers of beet sugar...*

— In the first place, as I see it, you have all sorts of fancy subsidies to the beet sugar producers. Their sugar is bought at the factory gate, whereas we have to ship ours and cover the storage in Europe. So when the chips are down, the European beet producer in fact gets much more than the ACP producer. And then, in the case of the Commonwealth Caribbean, we are higher-cost producers than some of our colleagues, in the Pacific for instance.

► *Why is this? Because of the salaries paid to the workers?*

— I wouldn't put it that way. It is a question of the standard of living in Guyana as against the standard of living of sugar workers in some parts of the Pacific. So even the £220 per ton is not as attractive as it sounds, because we don't keep our people in starvation.

► *But don't you think it is necessary to look for a solution to the sugar problems in the wider context of a relationship between the EEC and the ACP countries?*

— Of course the Common Market countries, at least those which are responsible for negotiations, know how important sugar is to us. For one thing, the sugar industry in this part of the world, as in most parts of the ACP world, was established by them and they know its importance and its significance. It seems to me, speaking as a layman and not an economist, that if the EEC really wanted to improve the terms of trade with all developing countries, it would be to their benefit to have more markets. You can't sell to paupers. There should be some specialization. We have to buy their industrial goods. They are competing with us in sugar, but they want to produce everything. Eventually they will find that we can offer no markets whatsoever. They are using good prime land, that could be properly used for other commodities, to produce beet sugar, and the beet sugar lobby seems to be quite strong. I don't think it's a question of their being ignorant of the importance of sugar. It is a question of their concept of where their economic interests lie.

The EEC ought to understand that, in the final analysis, 70% of its raw materials come from the developing world; and when the developing world catches onto that, I don't think they will be able to continue to bully us into their agreements.

► *Mr Patterson of Jamaica, as chairman of the ACP Council of Ministers, said a few months ago that Stabex has been beneficial to many ACP countries in a number of respects. But he also said that this form of compensation fails to take account of inflation and therefore does not offset the real loss of earnings. Do you think the mechanism can be improved, or is the only*



EEC Commission delegate Tue Rohrsted with Mr Cheysson (centre) when the EEC development commissioner met Premier Forbes Burnham in Georgetown in September 1977

thing to do to index the price of raw materials to the price of industrial goods?

— Indexation seems attractive and it was one of the alternatives I urged in 1975. But there seems to be an unwillingness on the part of the industrialized countries to agree to indexation. What we are trying to do as far as our sugar industry is concerned is to integrate it vertically; that is, to go into making paper and fibreboard from the bagasse. Therefore what now is wasted is to become an economic product, in which case we would be able to withstand some of the dips and price fluctuations from time to time. In addition, we were looking at the idea of making power alcohol from molasses. Furthermore, the sugar estates have been diversifying agriculturally so that we have intercropping both in temporal and physical terms. We are not coming out of sugar but we are diversifying. For one can expect that by the middle '80s food will be as expensive a commodity as oil.

"The EDF has the advantage of being multilateral"

► *How do you rate the EDF compared with other kinds of foreign aid?*

— I thought you might say that. The EDF has the advantage of being multilateral and consequently the possibilities of political strings are less than is the case with bilateral aid. In the second place, EDF money is concessionary in terms of interest. In the third place, in Guyana we have, I think, five projects of which three are major ones: The Upper Demerara Forestry Project,

the Fish Port Complex and the East Bank Berbice Road. Speaking for myself, let me point out that it was about two or three years ago—Maurice Foley was here—that we discussed and presented our projects, and only now they are moving.

I want to make a point. Naturally, we are grateful, but all this talk about aid is not really about aid, it's about trade—because they lend you the money and you have to take the same money and buy their goods. So it's to our mutual benefit—we get development and they sell their goods. So this sanctimonious idea of talking about aid, to me, it's social hypocrisy. We benefit in that we get development and they benefit in that they sell their industrial goods. Because it's hell to get funds for local costs. That is a big difficulty sometimes. We can get a project insofar as offshore costs are concerned, equipment, services, etc. and then to find local costs is a big problem.

► *But one could object that since every ACP country chooses projects to be financed by the EDF, those needing imported materials could be avoided.*

— That's not the problem. The problem is not the offshore costs, the cost of things that have to be imported. The problem is local costs—I mean, paying the local labour.

"A rose by any other name will either smell as sweet or have as many thorns"

► *The renegotiation of the Lomé Convention is beginning soon. Do you*

think the present Convention should be amended or a new Convention negotiated, which will take into account the experience of Lomé?

— I would suggest the latter. But I think it's playing with words to say that the old Convention should be renewed with changes or that a new one should be negotiated: quantitative change can involve qualitative change. I think we ought to at least identify the areas where there can be, and should be, improvement. Whether you want to do as some lawyers do, repeal the old act and enact a new act, or amend the old act, as long as you get the changes which you consider desirable, that is the important thing. A rose by any other name will either smell as sweet or have as many thorns!

But I think the basic problem goes deeper than just aid. The basic problem lies in the terms of trade. Now, if we want to buy a combine harvester, and you do have to buy combine harvesters—for rice—we can't negotiate the price at which we buy them. We are told: this is the price, take it or leave it. If we want to sell sugar, however, the same people who dictate to us say: this is the best price, take it or leave it. We can make this point about terms of trade *ad nauseam*, but sometimes it doesn't seem to get through that, in the final analysis, these same developing countries are good markets for the industrialized countries.

At the first Caribbean Festival of the Creative Arts in Georgetown, 1972



The indispensable cohesion of the ACP group

► Prime Minister, in the ACP-EEC circle, everyone recognizes the significant role played by the Caribbean group in the Lomé Convention negotiations. Considering the latest events in Africa, how do you see the internal cohesion of the ACP group in the next ACP-EEC talks?

— I can only express a hope that the ACP group will continue as a group, because it is necessary, even for the EEC or any other group of industrialized states. But you have two sides and if the ACP group is not united internally, it can't get the best terms. I think the ACP group is a significant development amongst developing countries; we chose to be a group *en bloc* that can negotiate, and I should hope that those of us who, for instance, have the greater interest in sugar would not confine our interest in the dialogue and negotiations to sugar. It may be sugar for us, it may be bananas for someone else, it may be citrus for others. We should look on ourselves as a group that not only has commodities to sell and we should support each other.

Human rights in a new convention "wouldn't bother us" but...

► After the joint committee met in Grenada, Commissioner Cheysson said the ACP countries now consider



Prime Minister and people

the EEC request for introducing human rights in the preamble to a new convention as reasonable. What is, for you, the importance of human rights in the Lomé Convention?

— I would say this. So far as Guyana is concerned, the inscription of such a term wouldn't bother us because we honour the convention on human rights. I have often said that, because of our history, we in the Caribbean thoroughly accept and respect human rights. But I say there is still too frequent a tendency on the part of European and North American countries to judge human rights in terms of their own experience. It is an imposition of your own ethos on other people. In the case of the Caribbean, it isn't that ethos which was already imposed on us when we were brought here as slaves or indentured, so we've had no problem. But to go to places like Africa and Asia and impose a European concept, one amongst which, I think, is human rights—what should be the political ethos—I think is an imposition. We all talk about human rights, we hang people for adultery or whip them for drinking alcohol, and therefore what is sauce for the goose is sauce for the gander. So the point I would like to make is that too frequently European countries think of human rights very narrowly.

They hold elections, right, we have elections. But the more important rights are the rights to a full life, like education; there is a right to leisure; there is a right to be looked after in old age or in cases of disability. Those rights are important.

► Now, if we can talk about Guyanese policy. A referendum is being organized for 10 July. What is the political purpose and what are the terms of this?

— It's very simple: it gives us an opportunity to rewrite our Constitution, which in our circumstances has become irrelevant.

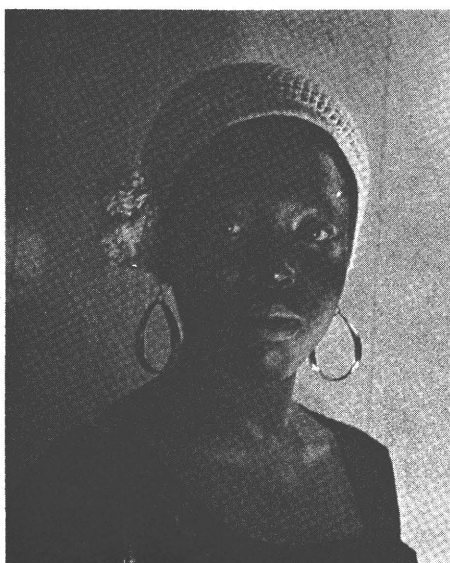
Socialism and democracy

► What are the innovations considered in the new Constitution?

— Certain declarations, for instance, equality for women, the right to work and an opportunity to work, land to the tiller—whereas the old Constitution gives free protection to ownership of property even if it is not exploited. We would protect property if it is owned or used—owned for use—but we wouldn't protect exploited property, and therefore we say land to the tiller, which is a very important provision in the context of our history. We may also put in a declaration about the right to free education from nursery to university, etc.

We also want to change the constitution of the parliament, so that not only will it consist of representatives elected from throughout the country but, in addition, 10 to 12 more chosen by the local government areas. Now, that's an experimentation which is foreign to the Westminster type and which we couldn't introduce without a referendum. So we say, let's have a referendum, let's have a Constitution written by a constituent assembly.





Guyanese women lose none of their beauty and charm through long hours of farm work

It's got some features which you wouldn't find in the Westminster type and, of course, to that declaration we now want a preamble; you know the one, something like we have now: "We believe in the deity and we are a democratic state".

You have freedom to worship and freedom not to worship. I happen to be a Christian but I can't impose my religiosity upon other people. So we have freedom to worship, and then we also want in the preamble to tell our people and our children where we came from and where we are going. We don't want to have a long recital but at least a reference to the Amerindians, who were the first revolutionaries we had in Guyana. In 1598 they rebelled against European occupation and oppression through black slaves.

We are moving into socialism in a state of transition. Then there are certain declarations which it may not be possible to concretize in terms of actual law but which can be tied in, for instance, not only with the government agencies but including the courts, which is a new concept. So it is a completely new approach and idea. But we propose to maintain the basic fundamental human rights which were in the old Constitution.

► Some newspapers say you intend to create a one-party system through the referendum...

— That springs either out of malice or ignorance, because I have power now under clause 13 of the old Constitution to ban all political parties and institute a one-party system. I can do it now. Why go to the trouble and expense of a referendum? So the person either said it out of malice or deep ignorance. In either case, that is my sentiment.

► How close are the links now between the member states 10 years after CARICOM was set up?

— Well, put it this way: CARICOM has faced a number of difficulties in recent years, primarily because of the world economic crisis, and practically every member state has adopted the attitude of safe-keeping and tended to be inward-looking, trying to see how they can save themselves rather than how they can save CARICOM. But I think most of us have come to realize that CARICOM is very important and we may be able to save ourselves more readily as a group than as a number of individual territories, and there is a renewed interest and desire to make it succeed. A few weeks ago there was an official's meeting in Barbados which went quite smoothly, and which a year ago would not have gone that smoothly; it seems likely there will be a ministerial meeting sometime in July(1) and it is hoped to get another ministerial meeting or two and eventually a summit meeting of heads of government, who by that time will have got position papers and will be able to make decisions.

There is a need for coordination of the system of consultation and a certain rationalization. But I think CARICOM could well recover. I don't think it will suffer the fate of the East African Community.

"We must also emancipate ourselves psychologically"

What we Caribbeans have to realize is that you can't achieve anything without difficulty, without disappoint-

ments, without quarrelling. Every day there are quarrels in the EEC but it doesn't break up. I was reading in the *Financial Times* a few days ago that there were serious difficulties in the EEC between the UK and the other Community countries, but it doesn't break up; and we have got to learn to quarrel without breaking up an important institution. We must have the political will. It is true we have to get over a historical legacy in the Caribbean, as in other parts of the former colonial world. The centre was a metropole and relations were maintained between it and the colonies rather than between the colonies themselves. So, now we have become independent or, in some cases, are in the process of becoming independent, it is necessary to emancipate ourselves psychologically. Well, we have done it in cricket, so I don't see why we can't do it for economic and political affairs!

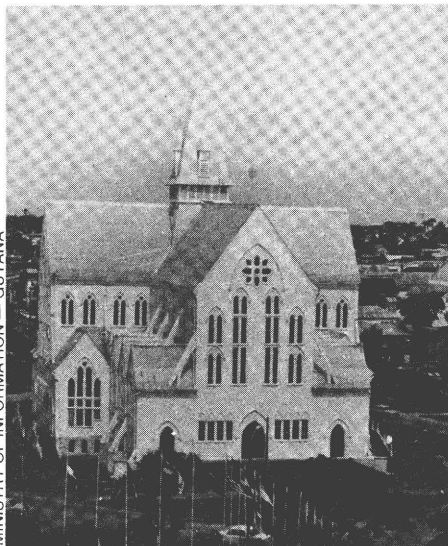
Border differences with Surinam: "we are for a peaceful solution"

► Prime Minister, what is the state of relations with Surinam?

— We have a border problem. Surinam claims what we call the river triangle, which covers about 75 sq. miles; we say it is our territory, for which claim we have historical and legal support. We, in fact, occupy the territory. Discussions are taking place. They broke down at one time, or rather fizzled out, but it is expected that my Foreign Minister should be meeting with the Surinam Foreign Minister some time, who also happens to be the Prime Minister. And I don't see why two small, poor countries can't iron out their difficulties without resorting to threats and force and counter-threats. We are for a peaceful solution. As a matter of fact, what intrigues me

(1) The meeting was held in mid-July in Jamaica. Hailed as a success by the *Guyana Chronicle*, it was the first ministers' meeting for 10 months and one decision was to meet every four months in future (next date, Georgetown in October). Important agreements were reached on freeing the movement of goods in CARICOM, on the common external tariff and on easing rules of origin to encourage the use of local raw materials. Commercial facilities were adopted in favour of the less-developed Caribbean countries and measures to help businesses were agreed. The CARICOM ministers also took the formal decision to participate in the new ACP-EEC negotiations and called for the ACP countries, with their experience of the Lomé Convention, to negotiate a "more attractive" agreement which, it was hoped, would be "more beneficial to the region as a whole".

The heads of government are due to meet shortly.



St George's Cathedral (Georgetown), the world's tallest wooden building



The Premier with youngsters in the mining area of Linden

is the OAU formula that we should respect traditional borders even after the imperialists have left, instead of starting to quarrel all over again about the borders. Where they were at the beginning when the others were here, well, let them remain there. There are all sorts of formulae we could use—joint exploitation, for instance, since the Guyanas have a lot of rivers and some of the vital rivers in Surinam rise in Guyana; without cooperation, no matter what the outcome, we control the sources. That will be done. So why can't we sit down and work out something? I'm very anxious, my government is very anxious.

► *What is the position as regards Guyana and COMECON? Newspapers are very contradictory on Guyana's relations with the East bloc...*

— I should explain. First of all we are a non-aligned country, which means we are not attached to any bloc. Secondly, as a concomitant to that, we want to diversify trade and economic relations. In the past, quite naturally, trade was almost exclusively with West Europe and North America. We have now established diplomatic relations with countries in East Europe, with the socialist bloc, and we have increasing trade and economic cooperation with those countries. Now CMEA(1) is the relevant regional body so we applied to CMEA for some form of association. To my simple way of thinking, just as we have an association with the EEC we can, if it is feasible, have an association with CMEA. We got a positive reaction and an agreement on our association, the

terms of which we are now working out with them. Whatever the terms of association, they must not be inconsistent with our obligation with CARICOM.

So that's all there is to it. There is nothing fancy about it. For instance, we expect to have some form of economic cooperation on fishing and in coal-mining, on our infrastructure, and in the expansion of our bauxite industry. We can sell to them, to West Europe and to North America. I never fully understand what is the problem. The United States is selling hand over fist—I saw Pepsi Cola on my lunch table in Moscow and when I go to the United States I see Vodka advertised, especially coming from the purest waters of Leningrad. I mean, what is wrong with us? And yet so many eyebrows were raised when we said we are having discussions with CMEA.

Closer relations between the ACP states and the European Community

► *Prime Minister, how do you see future relations between your country and the Caribbean, the ACP group as a whole and the EEC?*

— That's a very difficult question. I think the relations should be deepened. I don't introduce any high moral concepts here. A strictly materialist perspective forces upon me the realization that everybody will benefit. Both sides can benefit if both sides get a fair deal. We don't want to squeeze the EEC and say, "now give us £2 000 for sugar", but we say, "give us a fair price so that we can cease begging for, asking for, aid". Aid only satisfies

the moral yearnings of the giver. Let us come off that and say, "well, look, in these conditions we benefit, I think, and our mutual cooperation can be beneficial, in the short run, and also in the long run, where markets are concerned."

Secondly, I am a convinced regionalist. The CARICOM countries should continue to be a group, but they should only be a sub-group to the ACP and not an independent group, because, although the ACP countries may have various problems, there is one basic underdevelopment need: for technology, for know-how and for decent terms of trade. The commodity may be bananas or sugar or anything else, but the problem is basically the same, and I think it is advantageous to the EEC, or CMEA, or whatever it is, to deal with a group, in the same way as in industry even the most backward and most conservative employers have found it more convenient to deal with a trade union than to deal with a thousand workers. Even so, I think the EEC should find it easier and more convenient to deal with a larger group and the ACP countries should find it easier to deal with the EEC as a group. And all decisions on both sides are binding under the respective groups.

"In discussions and negotiations there is give and take"

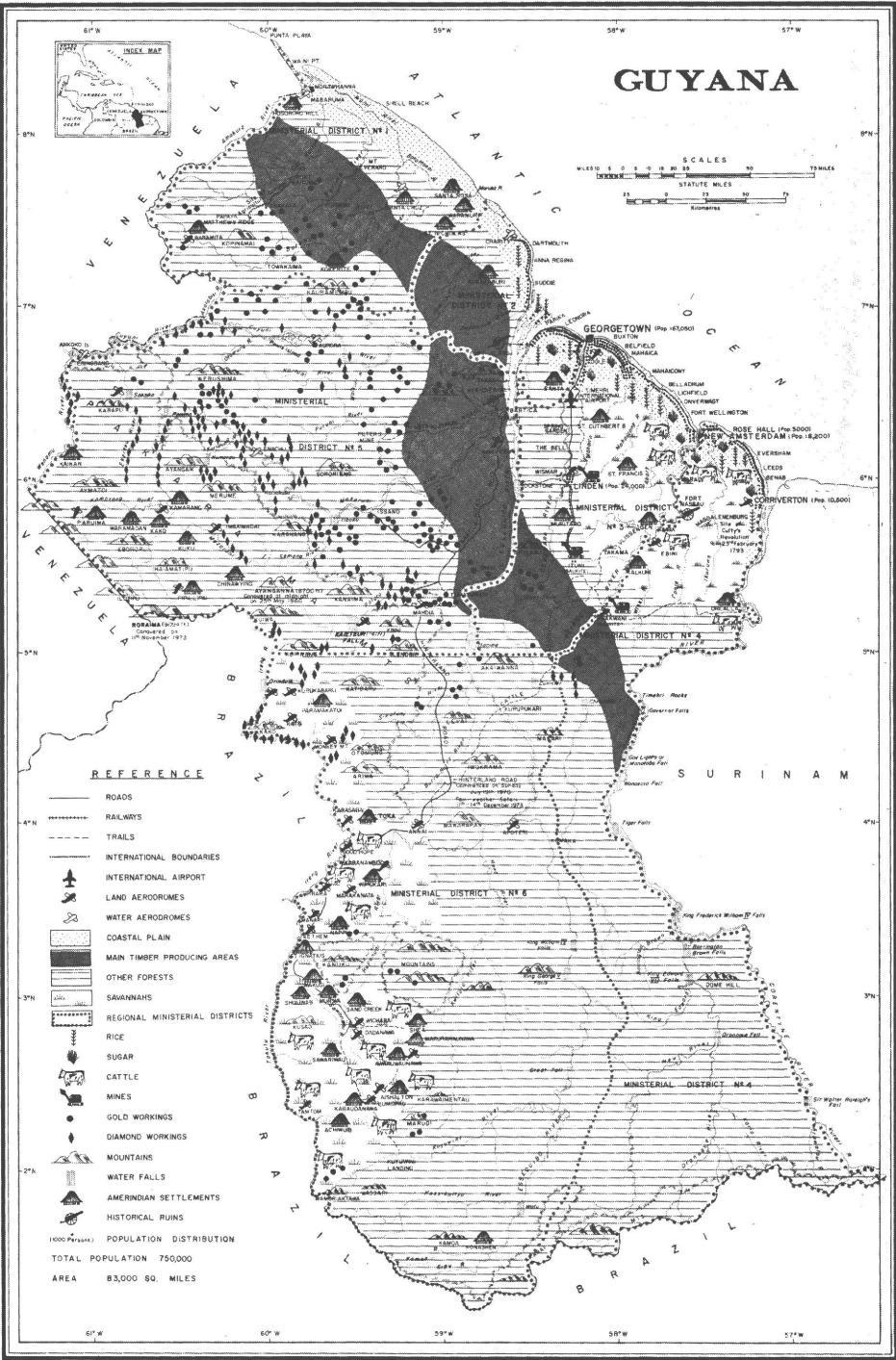
I think if we can get out of international economic relations all this cant—the man for this was Rudyard Kipling—about helping "the lesser breed without the law", if we could get all that cant out and look at things squarely, it would be better for all of us and I think the time will come when it

(1) COMECON.

will happen—being 55 I don't know if I shall live to see it, but I've got a grand-daughter who's already talking, she'll probably see it. I think it's the only way the world is going to survive; otherwise there must be uneasiness in the world. And remember, poor, desperate people have nothing to lose. You can talk all you like about disarmament and detente, it doesn't matter a tinker's cuss as long as you have these extremes.

I think that we in the developing world must learn that in discussions and negotiations there is give and take. Those in the developed world must also understand this, and so far as the developed world is concerned, I think it is good for them to appreciate that the world's wealth is not that limited—that everybody can be pretty well off. Just look at the resources that are still unexploited. Better terms for the developing world do not mean a diminution of wealth or comfort for the developed world. The sooner that is appreciated, the better.

I may be taking a simplistic view; but I remember speaking to a Canadian audience of members of parliament, we were talking about economic cooperation and so on, and they said to me, "but you know Canada's economy is in trouble, we are not in a position..." I said, "you know, we have unemployment of this type." I said, "do you realize that then you have economic cooperation? Let us stick with Guyana. Guyana has rich forests. What does it want? It wants equipment. It doesn't make equipment. Who makes the equipment? Canada. When you make the equipment, don't you give people employment?" One parliamentarian scratched his head and said, "you know, I never thought of it that way." So if both sides could only get over this impression that the prosperity of the other side means poverty for the first, I think the world would be a better place. But I suppose that's simplistic. I suppose I'm moralizing, which it didn't mean to do. □



A glance at the economy

Guyana's GDP was some G\$ 1050 million in 1976, slightly down on the 1975 figure (1060 m). The drop was due to falling prices in sugar and the producing sectors, which were not compensated by increased mining and quarrying. There has been no real improvement in the balance of payments deficit for two years, as the prices of imports have risen while exports have fetched constantly lower prices: sugar and rice contributed 23.2% and 3.4% respectively to GDP in 1975 but only 21.4% and 3.0% in 1976.

Percentage contribution of sectors to gross domestic product

| Sectors | 1973 | 1974 | 1975 |
|---|-------|--------|--------|
| Agriculture | 16.2 | 28.0 | 30.2 |
| Of which: Sugar-cane | (8.6) | (21.4) | (23.2) |
| Rice paddy | (2.2) | (2.7) | (3.4) |
| Fishing | 1.2 | 1.2 | 1.1 |
| Forestry | 1.0 | 0.9 | 0.9 |
| Mining and quarrying | 14.0 | 13.5 | 12.8 |
| Manufacturing | 11.2 | 14.0 | 14.2 |
| Of which: Sugar manufacturing | (3.0) | (7.5) | (8.1) |
| Rice milling | (0.5) | (0.7) | (0.6) |
| Transport and communication | 6.4 | 5.1 | 5.2 |
| Engineering and construction | 8.2 | 6.2 | 6.4 |
| Distribution | 11.2 | 8.9 | 8.8 |
| Rent of dwellings, financial and other services | 9.7 | 7.4 | 6.7 |
| Government | 21.0 | 14.9 | 13.7 |
| TOTAL | 100.0 | 100.0 | 100.0 |

Rasleigh Jackson, Minister of Foreign Affairs

The wider context of the ACP-EEC talks

"The spirit and letter of the sugar protocol"

The Minister of Foreign Affairs explains the difficulties arising from the Lomé sugar protocol, stressing that it is of vital interest to the ACP states. Even though views differ, he says, there are advantages for the ACP sugar producing countries. But the notion of price range must be redefined and he regrets "the real absence of parameters or precise reference data for ACP-EEC negotiations". Mr Jackson goes on to a general outline of the forthcoming ACP-EEC negotiations.

"Negotiations have both form and substance and I think the form is not conducive to really proper negotiations of substance. So we hope that, regarding the commitment we were given by Commissioner Gundelach last year for inducing a situation which will lead to genuine negotiations, that promise will be activated in relation to the next negotiations. Now, as you know, the protocol on sugar really runs to 1982, whereas the Lomé Convention comes to an end in 1980; so one can see the two in terms of the upcoming series of broader negotiations in relation to the whole Convention, or if one chooses, as being separate negotiations. As regards the Convention itself, there are, of course, different ways of approaching it.

There are some people who contend that what is required is an examination of the operations of the present Convention, to look for deficiencies in its implementation and to make appropriate amendments to take account of those perceived and agreed deficiencies. There is another approach that can be used, which would stem essentially, I think, from a recognition that the nature of international economic cooperation, the requirements of international economic cooperation and the international milieu generally, have changed significantly since the time when the Lomé Convention was negotiated. This fact perhaps warrants a new and completely fresh approach, based

first of all on a shared understanding of an acknowledgement of interdependence between developed and developing countries, that will seek to incorporate into the concept and provisions of any new convention those aspects of international economic cooperation that have been achieved since Lomé. This should also be a kind of forerunner of a much broader global arrangement for more meaningful and more equitable economic international cooperation, based upon the acknowledgement of interdependence and a shared perception of the requirements of justice and equity. So if you use that second approach, one could say that the renegotiations should not really be approached as Lomé II but really as a new convention between the ACP and the EEC. So there are those two different approaches.

The concept of interdependence must not remain a theory

► *You said the new convention can be based upon the interdependence between the developing countries and the EEC...*

— Between the developing countries and the developed countries as a whole, and that the ACP-EEC arrangement should not only reflect this but also be a forerunner, act as a kind of catalyst, for what the wider international grouping can do in this respect.

► *The interdependence is recognized by the developed countries and what they now want is to work concretely in that way. But the problem is, what is interdependence?*

— Well, you are quite right. It's clearly necessary to translate into concrete programmes of cooperation the rhetorical acknowledgement of interdependence, because it is possible to maintain the rhetoric of interdependence and still seek to implement programmes of action which, while paying lip service to this concept, really reflect hierarchical relationships of exploitation rather than of mutually-beneficial cooperation. I am not saying that this is

an easy task and I agree that one needs specific and concrete proposals that will make a reality of interdependence.

Over the last few years I think certain conceptual gains have been made in the discussions on international economic cooperation. This doesn't mean that there is a consensus of views on how to implement them. For instance, take the Common Fund: I don't think anyone now says we should not have it, whereas there was a time when they were saying that. And now we are working towards the kinds of mechanisms that would make a common fund operational and efficient. There is still a wide gap, but it is possible to say that there has been some progress in clarifying the conceptions, the understanding, of each other's position. Similarly, on the question of debt renegotiation — I am not saying that we are satisfied with the progress that has been made, and we need to continue very resolutely our efforts in these directions. I think that, for a variety of reasons, it should be easier in a general sense for the EEC to be more appreciative and understanding of the needs and the perceptions of the ACP countries — that it is for the global society, for the developed countries as a whole, to take a similar attitude in relation to the developing countries as a whole. And I think that we can have an approach whereby the ACP-EEC relations become a real and genuine catalyst in the wider international dialogue. I think we can, with skill and political commitment, achieve a kind of convention that will define a new relationship.

► *Have you really benefited from the Lomé sugar protocol?*

— I think even with some slippage in the ACP position there are benefits for the sugar producing countries. But I don't think the protocol has been operated and implemented in both spirit and letter — in other words, there could have been additional benefits.

► *Concretely, how can it be improved?*

— I can think right away of two aspects of the present protocol that can be revised. One is the requirement that we receive prices CIF European ports, which places a disadvantage on ACP producers. The EEC producers, and particularly the so-called DOMs, Martinique and Guadeloupe, get their prices ex-factory. It means that we are in effect penalized to the extent of about 2.40 units of account, which is the average cost of freight for the ACP sugar producers overall. That kind of charge is not borne by the EEC pro-

ducers. So that is one area in which we could have improvements. Another area, for example, relates to the way in which the protocol deals with shortfalls. It seems to me that there should be some arrangement whereby, within the global ACP quota, if one of the ACP producers has a shortfall, the ACP as a whole should be able to meet that as a whole. In other words, you must have a guarantee not only of access of a specified quantity but also a guarantee of price — I should put it the other way around: you should not only have a guarantee of price but also of access, and it's the best way to plan. If you can plan that each year you will get X thousand tons from the ACP, then it shouldn't really matter to Europe so much if Guyana has a shortfall of 1000 tons which is made up by Jamaica, for instance. So it seems to me that you can advance the aspect of cooperation if that kind of production guarantee or arrangement can be built into the quota.

► *Have you already discussed with the Commission, or between the ACP producers?*

— Yes, I think so.

► *So the ACPs agree with such a suggestion of providing the part which cannot be provided by a country under its quota?*

— Yes, but, you see, the interpretation given by the EEC lawyers at the moment is that the protocol does not provide for one ACP producer to meet a shortfall by another.

► *So the EEC doesn't accept the proposal?*

— Yes. So when you come down to

the details, there are ways in which we can have improvements. I have given two examples. As to the Convention as a whole, I think we also need to look at the possibility of mechanisms for the more efficient sorting out of differences between the EEC and the ACP. I think the modalities at the moment are rather cumbersome. There is an article, for instance, which deals with what happens in the case of a dispute. Nobody uses it.

► *If we have a look at the problems of sugar production in Guyana, there was a drop last year, but it seems that production will increase this year. Do you think you will have any difficulties in exporting it?*

— No, we don't have any difficulties exporting it. The difficulty is in getting a good price for what you export. That is the problem.

► *Commissioner Cheysson gave some figures recently in a press conference and he said that there is a surplus production on the world market...*

— There is a surplus in the EEC itself of nearly 3 million tons. We can't tell Europe how to organize its production. But historically it is a little odd that the Caribbean was fundamentally set up to provide sugar for Europe, and now Europe is saying, "we don't want your sugar".

It's a bit of a historical paradox.

► *Do you think it is possible to maintain sugar production in the long term?*

— I think that if the United States and Japan ratify the International Sugar Agreement and it becomes

effective, with prices stabilized between 11 and 21 cents a lb and an appropriately financed system of reserve stocks, I think you have there a possibility of regulatory mechanisms capable of stabilizing prices and production. This would benefit everybody, because you don't want to be paying 50 cents a lb one year and 10 cents the next — it makes a nonsense, in varying degree, of almost every economy that uses sugar. It's bad for the consumers and worse for the producers. Look what happened in the United States when the coffee prices went up and down. Consumer societies tried to organize boycotts.

► *The EEC is not a party to the International Sugar Agreement. If it was, together with the ACP countries, do you think it would be possible to obtain better prices on the world market and have some effect on world prices?*

— Well, I think this is the overall aim of the ISA, isn't it? The basic aim of the ISA is to ensure that there is price stability on the world market. Theoretically, I can see that. But the EEC is a major sugar producer and it should also be involved with the ISA. I'm not dealing with their arguments that the mechanisms are not sufficient — whatever the mechanisms, however badly they work, they work worse if a major producer is not included in them. From that point of view, I can agree with you.

► *There is also the problem of refined sugar. If the sugar was refined here, before being sold to the EEC, would that improve matters?*

— If you refine more sugar, you have to consider this, that the raw sugar is



Sugar-cane is floated down irrigation and drainage canals

basically sold to Tate & Lyle who are the refiners in the UK. And I think if you look at it historically, in terms of how the sugar protocol came about, I think Britain almost made it a condition of her membership that something should be done about the CSA, the Commonwealth Sugar Agreement, because of her interests in it. That's Tate & Lyle, who are dependent on raw cane sugar. It has political implications in Britain — the refiners employ people, who form unions and vote in the British elections. I'm not urging the British case, I'm just saying these things have to be considered.

► *Two years ago the Congo didn't provide its quota on time. But the late President told me that it was Tate & Lyle who were preventing this country from selling its sugar until after the deadline. So I wonder whether companies can have any effect on an international trade arrangement?*

— Well, there are two aspects to the price. You have the guaranteed price and the commercial price, as I understand it. The company cannot offer you less than the guaranteed price, which is what is supposed to be negotiated between the EEC and the ACP. Suppose the guaranteed price is X units of account; then you can get a difference, as things are presently structured, based upon an assessment of what price the refined sugar will fetch on the market — the commercial price. I think part of our contention in the past has been that we should not really be involved in the domesticity of the pricing arrangements, because that is something over which we have no control.

► *Even the Commission couldn't do anything about that...*

— Well, they didn't do anything; "couldn't" is a question of judgement. In the course of the protocol they should have annual negotiations on price, within the range of prices existing within the Community. But over the years we have never had a negotiation within a range. Maybe we have had a negotiation and the people we were negotiating with have said, "now look, in accordance with the protocol we have to negotiate within a range. Gentlemen, we tell you frankly, the upper limit of our range is so-and-so and the lower limit of our range is so-and-so. Let us examine all the factors that go into it". Then we on the other side would say, "no, look, the range within your Community is so-and-so and so-and-so". You have a negotiation, but the way it is operated is that the Commission's mandate has always been the lowest point in the Community range and we are told, "this is the best we can do for you". □

Summary of the EDF indicative programme and progress to date

The indicative programme drawn up by mutual agreement between Guyana and the Commission was signed in October 1975. It involves some 13 million EUA.

The main emphasis in the programme is on assistance in enabling Guyana to exploit her rich natural resources in the field of forestry, fishery and agriculture. One of the objectives for the programme is job creation for the increasing population, of whom more than half are below 20 years of age.

Forestry

Guyana has vast, untapped forestry, resources and the EDF has indicated an interest in participating in the financing (with 3.6 million EUA) of the Upper Demerara Forestry Project which will more than double the output of timber from the forestry industry through establishing one of the biggest sawmills in Latin America. The project will establish, in addition to the sawmill, an access road to the area, port facilities for shipment and a township for 1500 people. The project includes provision of management assistance to train the Guyanese management of the industry to be established. IBRD and the European Investment Bank have also appraised the project and are potential donors. The EDF is at present financing on a grant of 350000 EUA the engineering design study for the project, being carried out by a German consultant.

Fisheries

The Guyana Banks are rich fishing grounds but are at the moment primarily being exploited for shrimps, whereas there is still an unexploited potential for fin-fish fishery. The EDF is at present financing a feasibility study to establish the need for fish processing facilities in Guyana in addition to the shrimp processing facilities already existing (see *The Courier* No. 49 pp. 37-38). The supply of fin-fish will come from starting up fishing operations in addition to shrimping and from the by-catch of fish from the shrimping trawlers, today wasted because the fish is thrown back to sea. The study is financed by a grant of 140000 EUA and carried out by a British consultant: 3.6 million EUA has been allocated for this project.

Agriculture

The EDF has indicated an interest in financing an agricultural feeder road, the East Bank Berbice Road, of some 21 miles. 3.6 million EUA has been allocated. The road will reopen some very fertile land to farming, thus supporting the country's drive for self-sufficiency in food. The area has been cultivated for centuries but the existing dirt road has fallen into disrepair and is flooded several months of the year, forcing many farmers to give up farming. The EDF has financed the design study for the road on a grant of 130000 EUA. The study, which was carried out by a Surinamese consultant, has just been finalised.

The EDF has approved the establishment of a credit-line of 700000 EUA on a soft loan to the Guyana Agricultural Cooperative Development Bank (GACDB) which will be utilised for onlending to farmers, loggers, fishermen and cooperatives in farming and fishery to provide financing of capital inputs in their production. The credit line will strengthen the emphasis on the three sectors, given support in the indicative programme. The EDF has agreed in principle to a second additional tranche of the credit line to GACDB of 525000 EUA.

Training programme

A multiannual training programme of 545000 EUA was approved in 1976 by the EDF and covers training in various fields primarily industrial and managerial.

Food aid (outside the Lomé Convention)

Guyana will receive 500 tons of skimmed milk powder and 100 tons of butteroil from the EEC under the 1978 food aid programme.

Regional cooperation

In addition to the indicative programme, Guyana will in various fields directly or indirectly benefit from the 30 million EUA regional indicative programme agreed between the CARICOM and the Commission in June 1977. □

Founding development on national resources

Desmond Hoyte,
Minister of Economic Development

Desmond Hoyte, economic development minister, describes the economic situation in Guyana today. He explains the solutions his country has opted for, what its plans are and how planning figures in the achievement of its development aims.

Balance of payments deficit

Guyana has a serious problem here at the moment. It imports more than it exports and so is living beyond its means. The main causes, the minister suggested, are to do with the chaotic international system of trade. For four years now, the price of oil and all the other products Guyana needs to import for its development have been increasing constantly, while the price of its exports, rice, sugar, bauxite and so on, have been dropping. "For non-oil producers like us", Mr Hoyte said, "the effect of the soaring prices of oil and manufactures on the trade balance and the economy is something like nine



Desmond Hoyte

"Neither total capitalism, with its ineradicable inequality and sources of permanent conflict nor a bureaucratic, authoritarian economy"

times greater, since the fivefold oil increase is accompanied by an almost fourfold increase in the price of industrial products. And the industrialized countries often fail to realize that their

prices more or less keep pace with oil prices."

But, as Mr Hoyte explained, Guyana must solve its balance of payments problem with international relations as they stand. But how? The first possibility is to cut down on imports of luxury goods, such as non-utility vehicles and food products for which there are local substitutes. What is the point of sinking vast sums of money into importing "white" potatoes when local sweet potatoes can easily be used instead, particularly when ordinary potatoes are of no greater nutritional value?

The balance of payments problem is a crucial one. But, as Desmond Hoyte says, it is not just Guyana's problem and it has more to do with economic policy than political regime. Highly industrialized countries with substantial financial resources have difficulty with their balance of payments and so do others with considerable natural resources, even in the Caribbean.

Choices and solutions

Desmond Hoyte felt that economic and, of course, political choices must be made if this difficult problem is to be solved. One may elect to live above one's means, in which case too many debts will mount up and lead to general bankruptcy and the country being controlled by foreign powers. Or it may be thought safer and better for the population to develop national resources in all fields and control the economy in such a way as to ensure progress for all.

Guyana has opted for the second of these two alternatives, Mr Hoyte said, and this also leads to a political choice. The choice Guyana has made is for "a socialist economy" which will be "neither total capitalism, with its ineradicable inequality and sources of permanent conflict, nor a bureaucratic, authoritarian economy". Mr Hoyte added, "in Guyana we have a planned and flexible economy which offers people incentives. It is based on encouraging individual initiative and providing state help where necessary, with heavy investments, for example. We have highly decentralized planning based on a two-way flow of information, ideas and experience. In a word, we want to found our development on our own resources by using the system of co-operativism which is the truest and oldest form of socialism among all Guyanese, be they of African, Amerindian or Indian origin". □



Market in Georgetown
First priority to local produce

Gavin Kennard, Minister of Agriculture

“Guyana is one of the few countries that can feed themselves, whatever happens in the world outside”

The ACP countries realize that agriculture plays the leading role in their economic and industrial development. But the results of agricultural policies are often meagre when compared to their theoretical importance in economic programmes and planning.

Guyana, however, is one developing country which is achieving real success in the agricultural sector. It is one of the few ACP states to really produce enough, and maybe too much food and where agricultural prices are far from being the main burden on the household budget.

How has a small country like this, with its small population, managed to become the granary of the Caribbean and soon perhaps a major food exporter? Gavin Kennard, Minister for Agriculture, describes his country's agricultural policy.

► *Minister, Guyana exports rice to all CARICOM member states and also to the EEC. How much land is under this crop and how many people does this sector employ?*

— Rice is an important crop in Guyana. It is wholly owned by Guyanese; it is really the crop of the very small farmer, since most of the producers are very small farmers. In addition to the small farmers, of course, we have a few large producers farming between 400 and 1000 acres.

The state also grows some rice, but mainly for the supply of seed for farmers. In the state sector we have a total of about 3000 acres under rice, mainly to produce high quality seed of high-yielding varieties for distribution to farmers throughout the country. Last year we produced 220000 tons, which is a



Gavin Kennard

record, and this year, although the weather has not been as favourable as last year, we ought to produce about 190000 tons. So on average we produce about 200000 tons of rice a year.

Guyana is in the fortunate position of being an exporter of rice. We consume about 60000 tons a year ourselves; a further 20000 tons goes into animal feed, and 10000 provides the seed for next years crop, leaving about 110000 tons a year for export. So we export more than we consume and we expect this to continue at least until the end of the century.

The coastal area is very well suited to rice — it is flat, low-lying and well-watered and the humid, hot climate provides conditions in which rice thrives. Moreover, the people are traditionally rice farmers; our original Indian population brought this crop over with them. The traditional methods have now been improved by modern technology and today rice is a highly developed industry. For example, most of our

farmers use chemical fertilizers, fungicides, weedicides and insecticides. Most of the land is ploughed by tractors and most of the rice crop is harvested by combine harvester threshers rather than by hand. You may wonder how small farmers can provide themselves with expensive tractors and combine harvesters. They can do this thanks to the machinery pools that the government has established to service them throughout the coastal area.

The Guyana Rice Board has bought large numbers of tractors and combine harvesters and we service the farmers by ploughing their land and harvesting their crop. So, even on the smallest farm, production is quite highly mechanized. Some of the larger farms use aircraft for seeding and for spraying fertilizers and weedicides; last year, more acres were serviced by aircraft than in the sugar industry, which was the first to use them. In fact, the aircraft used for the rice is owned by the sugar industry, which hires it out for aerial seeding and spraying.

► *How important are the irrigation schemes?*

— There are very large irrigation schemes which we shall be introducing. The largest will be the Mahaira-Mahairony-Abary (MMA) project, for which we have obtained finance from the Inter-American Development Bank. It will be in two phases and for the first we have obtained a loan from them of US\$49.5 m to bring drainage and irrigation to 112000 acres of rice. The second phase would cover a further 150000 acres, and we hope it will start even before the end of the first phase. So about a quarter of a million new acres will come under rice in this MMA scheme alone. This project will also involve other crops for local food, dairy-farming, some oil palm and fruit, and it will be beneficial to the irrigation and drainage of the sugar plantations. The total area of the MMA project is 420000 acres, so it's a very massive project indeed. We expect to settle a large number of people in that area and to intensify the local production, which at present has to rely on the rainfall.

In addition to the MMA project, the World Bank is already financing the extension to the Tapakuma irrigation project and this is expected to double rice production on the Essequibo coast. The cost of that project — the Tapakura project — would be about US\$45 m and the finance has been secured for most of it already; the first phase is to be covered by the World



Rice is Guyana's second most important export crop

Bank and the Guyana government, and then the second phase will be financed by institutions such as IFAD the International Fund for Agricultural Development, the Canadian international agency and the UK's Overseas Development Ministry. We are already building the first phase of the project and, again, that will double our rice production.

The third major irrigation project is the Black Bush polder extension sche-

me, which is being looked at by the World Bank, IFAD and the Inter-American Development Bank. This is only in the Berbice area. Guyana is broadly divided into three counties: Essequibo, Demerara and Berbice. Tapakuma is in the Essequibo county. The MMA is largely in the Demerara county, although part of it is in the Essequibo as well, and the Black Bush extension is in the Berbice county. So all the people along the coast will benefit

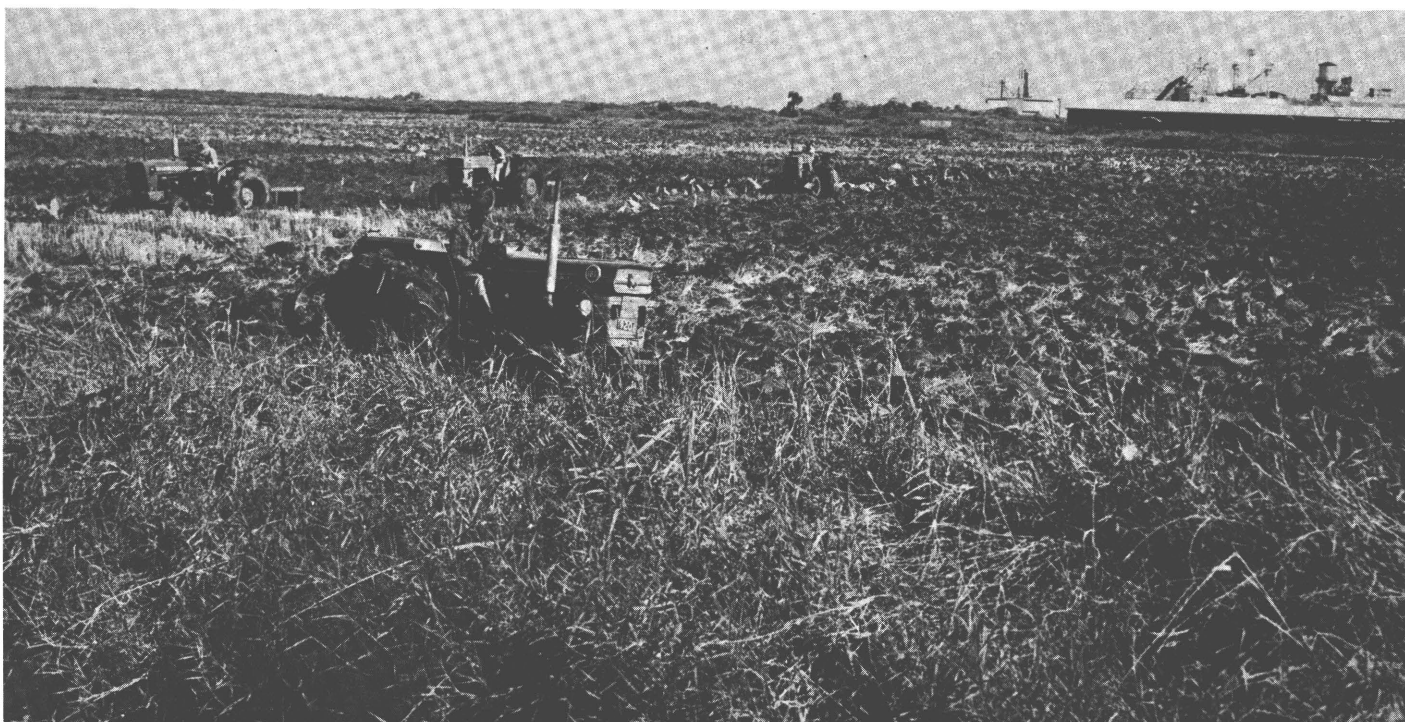
from these irrigation projects, which will more than double our rice production by 1985. This is why I say Guyana will be in the fortunate position of being able to export more rice than it consumes until well into the next century.

► As regards the diversification of agriculture, are there any problems with irrigation here?

— No. We are lucky that we don't have the problems that plague some countries, such as this disease bilharzia, or any other waterborne diseases. Of course, the water can be polluted by human beings. Nor do we have mosquitoes carrying malaria or yellow fever in the irrigation canals. We have got rid of all malaria in Guyana. As with filaria, the carrier is a domesticated mosquito that lives in houses, so there is no danger to the human population from these large-scale irrigation schemes.

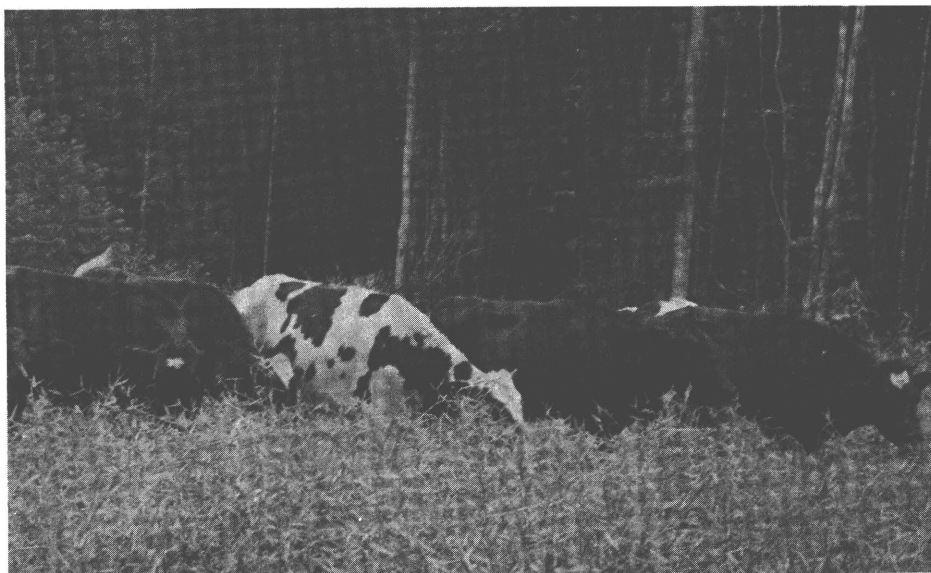
► What are the main other crops produced under the diversification scheme?

— Sugar is our main crop. Rice comes second, but it is more important because, due to its small scale, more people directly earn their living from it and it extends over 300 000 acres, a wider area than for sugar, which covers just over 100 000 acres. Then there are the tropical food crops — root crops, such as cassava, yams, sweet potatoes; and tree crops, such as plantains, bananas and breadfruit. In addition to the starchy crops, we have the legumi-



Working in the rice fields

"Even the smallest farms are mechanized"



Stock-raising in Guyana

"We are also self-sufficient in animal proteins"

nous crops: black-eye peas, kidney beans and all sorts of peas. And the green vegetables: spinach, lettuce, etc. That group is commonly known as our food crops, and they are third in importance in the agricultural sector. Those food crops contribute substantially to our needs.

We do export some surpluses to CARICOM, including processed foods, but essentially these are import substitution crops. Up to about five years ago we imported white potatoes, about 20 m lbs of what is basically starch and water, until the government placed a prohibition on this import to encourage local production of substitutes. Now people eat local root crops, such as cassava, instead, which means we have saved foreign exchange and provided employment. Wheat flour is another import that has been replaced by local production. Imports have gone down dramatically, and we have taken this a stage further by establishing three large cassava-processing factories; we

buy cassava from farmers and turn it into flour which is blended with wheat flour. The nutritionists tell us we can have up to 20% of cassava flour without upsetting the food value or baking quality of the bread. At the moment we are using 2%, by the end of the year it should be 5% and by the end of next year 10%. These facilities were only installed last year but farmers are already growing cassava on a larger scale.

► *Do you intend to produce all you need in the future?*

— At the moment, Guyana essentially feeds itself. We are fully self-sufficient in carbohydrate foods. The only carbohydrate imported is wheat flour, about 28000 tons a year, but this satisfies a taste rather than a need. We are also essentially self-sufficient in animal protein. The government did for some animal protein what it did for white potatoes — it has banned the importation of all fish, in any form. The EEC,

incidentally, is helping us with a big fish project. The same for pork and poultry. So Guyana is one of the few countries that can feed themselves, whatever happens in the world outside.

► *Apart from your traditional markets, do you intend to explore the possibilities of the African market?*

— Perhaps I should describe our marketing strategy. The main market for Guyana's rice is the CARICOM area and Guyana is virtually the sole supplier of rice to CARICOM. I say virtually, because you may see very small quantities of special rices packaged for the tourist trade in some of the tourist islands such as Jamaica; but this amounts to less than 1% of the total consumption of rice. Guyana therefore feeds CARICOM; we have been the main suppliers for about 30 years, under guaranteed market and price arrangements set up before CARICOM, and now we are the only suppliers. CARICOM accounts for about 80000 tons of rice a year and we expect this to go up to about 110000 tons by the end of the century. We should be able to supply that if this relationship continues, and there is no reason why it shouldn't.

Over and above the CARICOM requirement our next priority is to supply parts of the Caribbean such as Martinique and Guadeloupe — we ship to them when we have a surplus over the CARICOM demand. We have supplied as far afield as the Bahamas and Bermuda, Cuba and Haiti. Cuba is a very big importer, needing nearly 200000 tons a year. So our first market is the Caribbean.

Beyond that, we are looking for high-priced markets to take our best quality rice and we have shipped small quantities to the UK and West Europe, where we have many enquiries for high-quality, long grain, high-priced rice.

In Africa the strategy will be similar. We will be looking first at the high-priced, high-quality markets. We have had many enquiries, for example, from Nigeria, which is a big buyer of high quality rice — too large a quantity for us to supply — so we know the potential is there. In both East and West Africa we have had enquiries for other qualities of rice. So, with the spirit of togetherness in the developing countries, we know we will be able to find markets for our surpluses in Africa. With a continuing healthy EEC-ACP relationship, we will have a firm market in Europe for our very best qualities of rice. This is roughly our marketing strategy. So we see no difficulty in disposing of the projected increase in our production in the Caribbean, Europe and Africa. □



Growing black-eye peas under Guyana's food crop campaign

GUINEA

Guinea is a member of the Lomé Convention and is taking part in the new Brussels negotiations for the next ACP-EEC cooperation agreement.

Guinea's re-entry on the international scene, under the leadership of Sékou Touré, President of 20 years standing, has made something of a splash. In recent months, President Sékou Touré has visited many African states and some Arab countries outside Africa. He attended the OAU summit in Khartoum, his first since 1965, and has just visited the Gambia and Cape Verde. This, after the famous Monrovia meeting, shows the rôle Guinea can play on the African continent, particularly since the country has vast possibilities, especially in mining—its mineral resources have been called a "geological scandal"!

Guinea's mineral and hydro-electric resources⁽¹⁾

Guinea has rich mineral resources. It has bauxite, iron, gold, diamonds, uranium, chromium and more. Its bauxite and iron reserves are among the largest in the world (see table below).

There are also seams of copper, chromium, manganese, berillium, platinum and graphite.

Hydro-electric potential

The coast of Guinea is the nearest to the Fouta Djalon. The plateau at the foot of the mountains slopes down to the coast and abundant water courses provide good conditions for hydro-electric power.

Studies carried out so far put the HEP potential at 63 200 GWh, with a total useable output of 13 600 GWh p.a.

The Konkouré is the best river from this point of view, being potentially able to supply 40% of the total useful production of the country.

Other suitable sites include Korafinda on the Fataha, the Kaga, Diaoya and Koujoutamba on the Bafing and Gaoual on the Tominé. Production here will be between 70 and 140 MW.

Bases for development

Since independence, Guinea has done a great deal to encourage horizontal and vertical cooperation, in the reciprocal interest of the nations, for effective and lasting cooperation.

Our respect for the sovereignty of nations and for our own commitments make our country a privileged field for bilateral and multilateral cooperation, and for many years now, many companies have been working in the Republic of Guinea in the best spirit of understanding.

The mining sector

Mining has developed rapidly over the last few years, largely due to production being started at the Boké-Sangaredi deposit by the Compagnie des Bauxites de Guinée. It currently represents some 20% of GNP and 97% of export earnings.

| Main bauxite deposits | | | | |
|------------------------------|------------|----------------|--------------------------------|------------------|
| N° | Deposit | Reserves (t) | Grade | |
| | | | Al ₂ O ₃ | SiO ₂ |
| 1 | Boké | 4 700 000 000 | 58-65 % | 0.8-1 % |
| 2 | Fria | 650 000 000 | 45-48 % | 2-3 % |
| 3 | Kindia | 200 000 000 | 48-52 % | 2-3 % |
| 4 | Tougué | 4 000 000 000 | 47-52 % | 3-4 % |
| 5 | Dabola | 1 000 000 000 | 48-58 % | 1,75-2,3 % |
| 6 | Pita | 200 000 000 | 48-52 % | 2-3 % |
| 7 | Dinguiraye | 60 000 000 | 45-48 % | 3-4 % |
| 8 | Siguiri | 30 000 000 | 45-48 % | 3-4 % |
| 9 | Forécariah | 10 000 000 | 44-47 % | 4-5 % |
| 10 | Gaoual | 2 900 000 000 | 58-60 % | 1-2 % |
| Total | | 13 750 000 000 | | |

| Main iron ore deposits | | | | |
|-------------------------------|------------------------|----------------|---------|------|
| N° | Deposit | Reserves | Grade | |
| 1 | Mount Nimba | 2 000 000 000 | 65-70 % | iron |
| | Mt Simandou | 7 000 000 000 | 65-70 % | iron |
| | Kaloum (Ckry) | 6 000 000 000 | 50-52 % | iron |
| | Forécariah (Quartzite) | 100 000 000 | 45-55 % | iron |
| | Bassin Tominé | 500 000 000 | 58-60 % | iron |
| Total | | 15 600 000 000 | | |

(1) From official sources in Guinea.

For the moment, activity is confined to bauxite mining and alumina production (Friguia company), but large iron deposits have been found at Mount Nimba and Simandou and the Mifergui (state/private) company is running a development project on these.

Diamond mining has stopped but talks are now being held with a French company with a view to starting up prospection once more.

Uranium and oil prospection has also been undertaken.

Bauxite and alumina

Known bauxite deposits contain almost 9 000 million tonnes, one third of world reserves.

The ore is usually high-grade (50-60%) with less than 3% silica.

Three deposits are being mined at the moment.

Boké-Sangaredi

This was opened in 1971 by the Compagnie des Bauxites de Guinée in which the government holds 49% and the Halco(1) consortium 51% of the shares. The Boké deposit produced 4.1 million t in 1974, 3.3 million in 1975, 6.4 million in 1976 and 7.4 million in 1977. It should reach its 9 million t capacity in 1980.

Kindia

Exploitation of this deposit was started by the USSR on behalf of the entirely government-owned Kindia Office des Bauxites (OBK). Production in 1976 was 2.5 million t for a total annual capacity of 3 million. The total investment of \$100 million was financed by a loan from the USSR. Agreements provide for 90% of the product of bauxite sales to the USSR.

Agreements provide for 90% of the product of bauxite sales to the USSR to go to pay back Guinea's debt (56%) and to purchase Russian goods and products (44%). Guinea can dispose of the remaining 10% of production as it likes.

(1) Shares of "B" category partners:

| | |
|-----------------------|---------|
| Alcoa (USA) | 13.77 % |
| Alcan (Canada) | 13.77 % |
| Martin-Marietta (USA) | 10.20 % |
| Pechiney (France) | 5.10 % |
| Vereinigte Aluminium | |
| Werte (Germany) | 5.10 % |
| Montedison (Italy) | 3.06 % |

Total 51 %

Friguia

The Fria deposit, which Pechiney began exploiting in 1960, contains some 650 million t. The bauxite is processed into alumina on the spot. Production capacity is 650 000 t p.a., although actual production has been much lower than this in recent years (536 000 t in 1976 and 560 000 t in 1977). The mine is run by Friguia, 49% of the shares of which are held by the government(2).

Other projects

Various other bauxite-mining projects have been dawning, the most advanced being at Aye Koye to the north of Sangaredi. The study for this is being carried out by Alusuisse and a state is being considered, involving the Guinean government and various Arab countries (Saudi Arabia, Iraq, Libya, Egypt, Kuwait and the Arab Emirates). Reserves have been assessed at 1.3 million t and the ore can be transported down the now better-developed railway between Sangaredi and the port of Kamsar.

There is a further project in the Tougue region in the north and a mixed Alusuisse/government company has been set up. A similar system applies to the Dabola deposit, which is due to be developed by the Yugoslav Company Energoprojekt with the possible association of the American Reynolds group and Algeria. The main obstacle to the early exploitation of these two deposits is their distance (500-600 km) from the sea and the attendant transport problems.

Iron ore

Mifergui(3), half of whose shares are held by the Guinean government and half by various foreign partners, will be exploiting the very rich iron ore deposit at Mount Nimba (reserves of 2 million t of 68% grade ore).

A contract for the study and development of this deposit has gone to the American Kaiser Industries Corporation and, according to the results, financing for the operation will be sought from end 1978. US Steel could be associated with this project, which will have IBRD backing.

(2) The foreign partners form a consortium, Frialco, and hold the following shares:

| | |
|-------------------------|---------|
| Noranda (Canada) | 19.25 % |
| Pechiney (France) | 18.25 % |
| British Aluminium (UK) | 5.50 % |
| Alusuisse (Switzerland) | 5.50 % |
| VAW (Germany) | 2.50 % |

Total 51 %



Contrasts at the Fria mine, Kimbo, (Guinea)

Uranium

The Guinean authorities signed an agreement in July 1977 with a consortium comprising Cogema (a branch of CEA) and the Japanese NPC on uranium prospection in the northern half of the country.

AGIP Nuclear, an Italian company, is negotiating with this consortium with a view to joining. Prospection has begun, although no results are as yet available.

Diamonds

Diamond production was stopped in 1975 to put an end to speculation and smuggling, but may well be started up again soon. French, American and British groups have made offers to the Guinean authorities.

Oil

Drilling was started in 1977 by Soguip, the Guinean oil company. 51% foreign partners: Bulles Resources International (US) 40.8%, Naftages (Yugoslavia) 10.2% and 49% Guinean government on its offshore 44 000 km² concession. So far results have been negative but more drilling is scheduled for 1978.

(3) Current breakdown of shares

| | |
|---|---------|
| Nigerian government | 13.50 % |
| Libyan government | 10 % |
| Algerian government | 7 % |
| Nichimen (Japan) | 7 % |
| A Spanish group (Ini, Sierra Mineraí & Cofei) | 5.75 % |
| Mineral Importexport (Romania) | 2.50 % |
| Somer (France) | 2 % |
| Usinor (France) | 2 % |
| Liberia | 0.25 % |

Total 50 %

Economic outline

General

Population: 5.5 million (approx.)
increasing at the rate of more than
2.8% p.a.

Area: 245 857 km²

GNP: \$ 840 million (1975)

Per capita GNP: \$120 (1975);
\$140-160 (present estimate)

Currency: 1 syli = 0.04 EUA (1 EUA =
25.38 sylis)

Main products

Agriculture (1/3 GNP and 3% of
exports in 1977)

| | |
|------------------|---------------------|
| — paddy rice | 425 000 t (75/76) |
| — fonio | |
| sorghum | 83 000 t (75/76) |
| millet | |
| — maize | 73 000 t (75/76) |
| — manioc | 1 110 000 t (75/76) |
| — sweet potatoes | 75 000 t (75/76) |
| — yams | 61 000 t (75/76) |
| — groundnuts | 85 000 t (75/76) |
| — coffee | 15 000 t (75/76) |
| — citrus fruit | 49 000 t (75/76) |
| — bananas | 100 000 t (75/76) |
| — pineapples | 153 000 t (75/76) |
| — palm nuts | 33 000 t (75/76) |

Mining (20% GNP and 97% of export
earnings)

| | |
|-----------|----------------|
| — bauxite | 11 000 t p.a. |
| — alumina | 600-650 t p.a. |

Breakdown of GNP

| | |
|-------------------|-----|
| — agriculture | 40% |
| — mining | 20% |
| — industry | 5% |
| — construction | 2% |
| — tertiary sector | 33% |

Current imports (\$ million - 1976)

| | | |
|-----------------------|------|------|
| Total: \$ 115 million | 100% | |
| — Foodstuffs | 16 % | 54 % |
| — Textile | 38 % | |
| — Motor vehicles | 14 % | |
| — Petroleum products | 12 % | |
| — Building materials | 6 % | |
| — Various | 14 % | |

Origin:

| | |
|-----------|------|
| — EEC | 45 % |
| — USA | 12 % |
| — COMECON | 16 % |
| — Africa | 17 % |

Reflections on the concept of human rights

“Against discrimination and for equality in all countries”

by President Sékou Touré

“A comprehensive understanding of
the concept of rights involves seeing
both its universality and its specific
meaning in each country.

Although the various elements are,
by virtue of what they have in common,
generally held, what is generally held
does not include all the individual fea-
tures of the elements that go to make it
up.

From the point of view of the con-
cept of human rights, therefore, all
countries have this general aspect in
common, but each also has the original
features that distinguish it from the rest
and are specific to its own practical
conditions of existence.

The values which a legal system
safeguards can therefore be divided

into two categories. They are the
values shared by all mankind and the
individual values which vary in kind
and form throughout the history of any
given country.

Take Guinea. What is significant here
is that the central committee's report to
the 11th congress of the Democratic
Party of Guinea is entitled: “Qualifying
the power of the people”. What does
this mean? It means that, as from this
11th congress in September, the
government has to delegate most of its
powers of assessment and manage-
ment to the basic people's organiza-
tions. For example, the head of state
will no longer have full control over the
appointment of ministers, in spite of
the fact that the ministers are his colla-
borators. He will no longer appoint
governors or district administrators, as
they will now be elected by universal



Ahmed Sékou Touré
President of the Republic of Guinea

suffrage. Total responsibility is now in the hands of the people of each village and each urban district.

Such measures are, undeniably, specific to the development of the people of Guinea since 1947 when our democratic party was set up. And this is why we should always bear the law of the specific values of countries in mind.

If we do not take this law and the country's stage of historical development into account, it would be tempting, for example, to invite a kingdom to adopt the same legal system as the people's regime we have in Guinea. This would be an aberration! The citizens of a kingdom have their own social bases, they live by historically evolved standards, they have a political concept of life whereby the king is the undisputed holder of all power. But, in Guinea, no individual can replace the people. We elect our leaders and they can be removed at any time, a vital condition in a people's regime, as there is nothing so dangerous as delegating power to one individual, even in democratic conditions, for an unspecified length of time. Arbitrariness and tyranny arise from being used to giving orders and having them obeyed.

So much for the specific aspect of rights, on which their relativity is based.

But if, as we have said, all men share an ideal which goes beyond society, religion, colour, race, nationality or level of development, that ideal is equality within the given social system. This is the universal aspect of rights.

The system may be a monarchy where one person, by virtue of heredity or origin, holds all the power. But within this system, everyone wants to be treated equally. Or it may be a republic, with restrictive criteria. Again, everyone wants to be treated without discrimination, regardless of religion, colour or race.

So, whatever the system, discrimination is condemned everywhere.

For the progressive, human rights mean internal harmony, harmony with the social environment and harmony of society as regards the individual and the community. For the conservative, human rights mean the predominance of the individual, such predominance, however, being suspect as not all individuals are involved. It is this concept

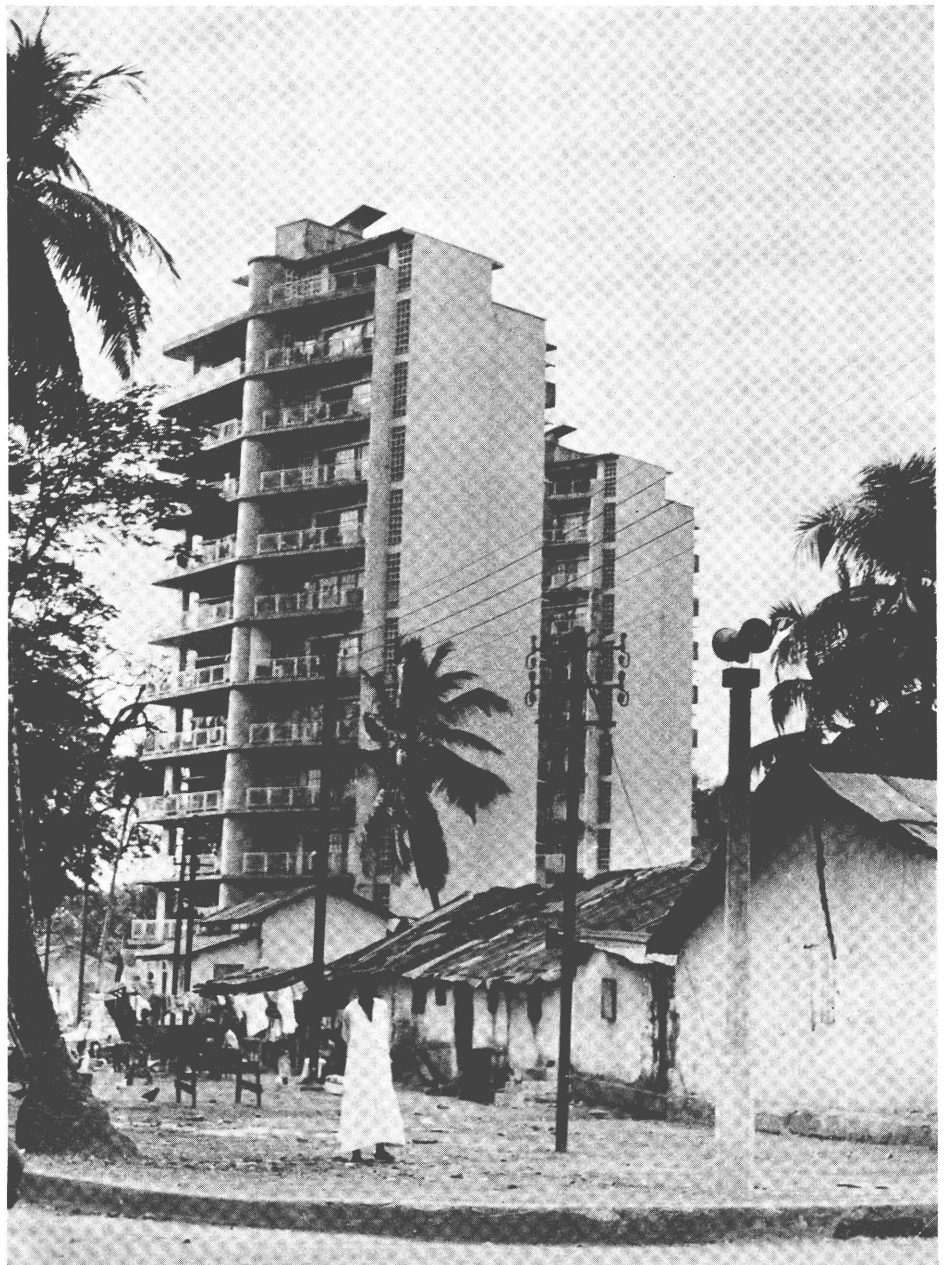
which poses the problem of the relations between society and the individual in terms of opposition and sees conflict as inevitable.

But we are not entitled to interfere in the internal affairs of another country which sees things differently from ours on the pretext that what is universally applied in our country is neither allowed nor respected there. We have no right to interfere in the internal affairs of any country, be it kingdom or democracy. The citizen of that country has the right to put the problem of the monarchy to his government. But we have not. We are against importing and exporting ideology.

Human rights, in absolute terms, would mean that the concept of them

we have in Guinea should be forced on others. But the fact is that the content and the dimensions of human rights vary from one country to another. Saudi Arabia is a moslem country and nearly all of Guinea is moslem too. The two countries have the same religion. But, in Guinea, the concept, use and social purpose of rights are such that even the Iman is elected. What other country elects its religious leaders? Yet we have managed to get this practice accepted. Certain individuals fought against it, but how, in the name of right, could their opinion prevail against democracy? The moslem Arab countries do not see it like this, but we cannot force them to accept our idea of democracy.

In Guinea, the law goes so far as to restrict our rights to our own assets to

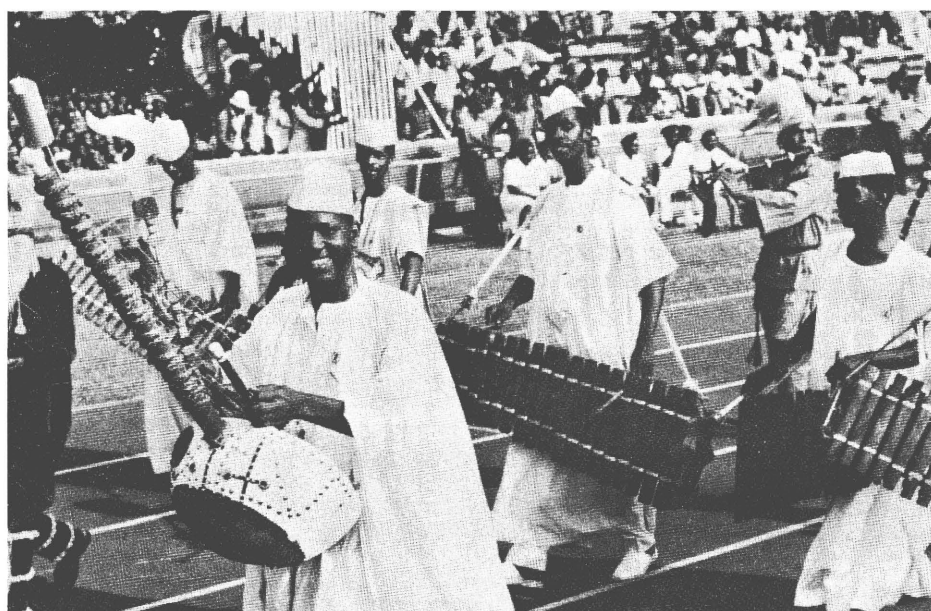


Contrasts in dockland

the benefit of our family. As long as my family's interests are not preserved and its future not assured, I cannot dispose of my personal assets without the consent of my wife and any children who have attained their majority. There is no law like that in France, the USA or anywhere else. If I was French and I owned a factory and a house, a factory I had built up myself, my children would own whatever they themselves could produce later on and I would be entitled to dispose of my factory as I saw fit, when I felt like it, and my wife and children could do nothing about it. Nothing like this could happen in Guinea, where the interests of the family and society always come before the lesser interests of the individual. We even protect the new-born. **What we say is that human rights exist because man exists. Everyone who exists has the right to live, the right to protect his possessions and the right to have some hand in the management of his country's affairs.** The conditions for and the prospects of being happy are part of his rights. We are ahead of many countries as far as this philosophy is concerned. But in practice, some people base their assessments on their own philosophy and their own concept of things and criticize others without comparing the fundamental bases of the legal systems. They think there is reason to condemn those who are different. It is easy to criticize anyone who is different. So the peaceful construction of the international community will never be achieved if everyone assumes his way is the only way and discounts the deliberate choices of others. Intolerance leads to tyranny.

So it is more rational to talk about **the fight against discrimination and for equality in all countries** than about rights which vary from one country to another, as each country has its own ethic and its own permanent demands. The former conception is more dynamic.

Morocco, for example, has a quite different concept of rights from France and the concept in the USSR is different from that in China. Equilibrium relates to a given environment. We don't compare ourselves to French citizens who have the right to criticize their government and fight to determine or change their institutions. We Guineans should compare ourselves to other Guineans in Guinea. So, the equilibrium is both internal and external. Internal in that it is reflected in us by the nature of our relationships with all Guineans in Guinea and external when we consider relationships with non-Guineans. But the external aspect



Guinean musicians

should not involve us in a comparison with a citizen of the USSR, France or the USA which either negates our own personality or denies that of the foreigner.

It is better for each country to set up its own institutions, laws and rules on the basis of its own level of social development, which supposes specific political, economic, social and cultural realities.

A comparison of French and American law could provide bases for criticizing both, if it is confined to legal speculation. But the law did not create man. He created the law. Man asserts himself in dynamic reality and he must be seen concretely, against his natural, national, regional and family background. The full range of prerogatives of this background must be recognized so that all men have equal opportunity within it.

Any attempt to deal with the problem outside the concept of history and of the responsibility of the existing national communities will be full of unavoidable but regrettable clashes of ideas. There will be no possibility of agreement. Political regimes differ, even those with the same ideology. In socialism, for example, the economic and social priorities vary from one country to another. Some are based on heavy industry and some on agriculture. There may even be differences within the same country. Things will inevitably develop along different lines in countries with the same ideology. Socialism will always be socialism in a given framework, but the quality of the bases of the regime will become more sharply defined, as man's hopes and man's pro-

gress are boundless in whatever social community he lives.

There are also differences in a capitalism system. Colonial capitalism is, in its ostracism, different from industrial capitalism. Better still, in certain capitalist countries, the multinationals are in contradiction with the national interests in that they consider that their view is legitimate and that they are working in the interests of all nations. But, in turn, these nations want to exist on their own terms. They have values in which they believe, on which their whole philosophy is based and which are reflected in their behaviour. They want to be the extension of no one but themselves.

And even if we agree on human rights today, as contradictions between nations develop, so differing interpretations will create fresh tension.

So we entirely agree that it is all a question of **protecting man, of fighting against discrimination**. Equality must be established, as far as possible, at the level of the nation. **The universal prerogative will then be freedom. Wherever he is, man must have complete freedom.** Freedom to develop, to express himself, to be educated and to choose, provided his choice is of no danger to the community.

The concept of non-discrimination, which is a clearer version of the concept of equality, is added ammunition in the international fight for greater human and social progress throughout the world today, in each nation, region and family, right down to the basic unit of humanity, man himself." □

Cheysson in Conakry

Summing up cooperation under the Lomé Convention

At the end of the official visit he made to Guinea in July at the invitation of Président Sékou Touré and the state party political bureau, EEC development commissioner Claude Cheysson gave a conference for representatives of the Guinean press and all accredited members of the international press in Conakry. First, he took the opportunity of summing up Lomé cooperation in the fields of finance, agriculture, industry, infrastructure, training and trade.

He then mentioned his talks with President Sékou Touré, a friend of many years' standing, with the political bureau and the ministers as well as the forthcoming negotiations for the next convention, Mr Cheysson laid particular emphasis on the fact that every nation was entitled to its own development model and should feel responsible for and master of its own destiny. The Lomé Convention, he said, was a contract intended to facilitate cooperation between neighbouring countries.

"Cooperation with Guinea, as with other ACP countries, covers a whole range of fields.

Finance. — We have provided Guinea with some \$75 million, mostly in the form of grants plus a few loans at 1% over 40 years. The priorities were fixed by Guinea itself. It is always the recipient governments which decide how to allocate the financing we provide.

Agriculture — The first project in the agricultural sector to receive the support of the Guinean government was the one to set up rural engineering brigades to work in the various regions and help develop basic agriculture at

village level. Thirteen such brigades, able to handle all the problems that crop up at rural level, will gradually be set up and equipment for them is beginning to arrive now. We have carried out a study of cotton development and the rural engineering brigades will be directly involved here, as the idea of both the President and the political bureau is that the cotton industry should be developed in the villages. They do not want just one or two huge plantations. What they want is for cotton to be grown in each village and rotated with other crops.

Our action in the rural sector also includes providing support for the opening of the Institut Polytechnique Maritime and for the development of the Ecole de Pêche by providing a teaching ship and training facilities for Guinea's sea fishermen.

Industry. — Industry is the other main sector of our activity. We have completed a study on a modern textile production plant in Sanoya, near Conakry, and work on a modernized factory will be started in the autumn. The whole operation represents something like \$35 million in grants and special loans. Production should start in 1980, so things will have to move fast if the whole textile complex is to be in working order by then. The scheme will naturally involve training staff for this and for future textile development, as the government has told us it intends to continue developing this sector to cover at least all the country's own needs.

Our activities in industry also include a study for a plastics factory, stage one of which, it has been confirmed, is due for immediate implementation.

Infrastructure. — We have earmarked funds for a study of the modernization of the Conakry-Kankan railway, for the Kankan-Mamou road and, at the joint request of Mali and Guinea, for the road beyond Kankan to Mali, to

Bougouni. This is a regional project and we are contributing to it to improve communications between Guinea and Mali.

Training. — And finally, we have many smaller training projects: five polytechnics teaching masonry, carpentry and so on; training for hospital equipment maintenance staff; laboratory equipment for the faculty of agronomy; a soil investigation laboratory to enable peasant farmers to adjust their crops, fertilizers and so on.

I should add that our help also involves a regular food aid programme for Guinea.

This year it has amounted to 5 000 t of grain, 250 t of milk powder and 185 t of butteroil and there has been an emergency programme, because of the drought, as well. The drought that struck Guinea this year has meant providing an exceptional amount of aid, including the supply, within a few weeks, of lorries to transport the contributions of food, veterinary products, hydraulic equipment for wells, and so on.

Trade

We also maintain close trade links with Guinea, since the Lomé Convention means it has free access to our market. We shall be exchanging information on a certain number of potential sectors of development with Guinea, possibly including the mining sector, as Guinea wants to go on developing its already considerable mineral production. We Europeans are the first to be interested because Guinea already supplies us with a lot of minerals and may well be supplying us with a lot more, iron ore, for example, in future.

The present negotiations

We have discussed our cooperation as a whole with the President, the political bureau, the minister for planning (who, as deputy PM, is in charge of administering all our means), and the prime minister (the national authorizing officer, assisted by the minister for planning). The time is ripe for this as we are now negotiating a new convention between Africa and Europe.

What will this new convention involve? On the technical side, we think the problem of investment warrants attention.

Guinea has huge investments in the companies it controls, which is perfectly reasonable. But can we contribute to the development of these investments? Can we help Guinea's control over sectors where there are investments?

As far as industrial cooperation is concerned, we think it is possible to improve things. But overall, and this is certainly something I learned from my talks with the President, the political bureau and the ministers, the important thing is to assert the principles on which the Convention is based.

"Each nation is entitled to its own development model"

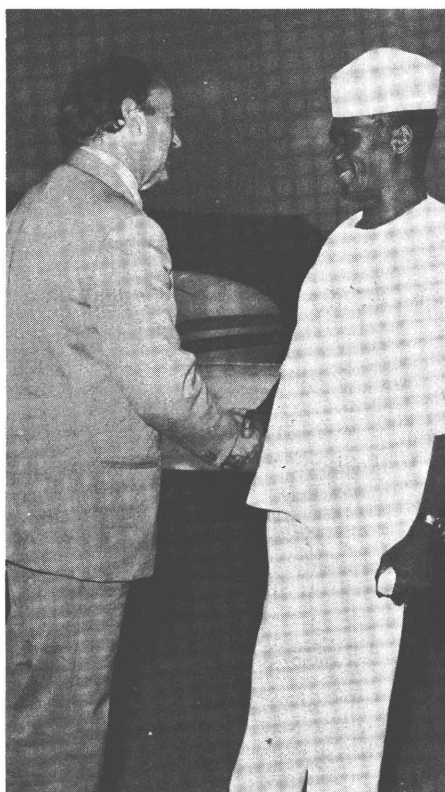
The first principle is that the Africa facing us is a bloc, a single unit. There is no way we could take sides in Africa even if we wanted to. We provide the means of development and each country uses them as it sees fit in the light of its own development model. Guinea is a socialist country. One of its neighbours is not. But they both have the means of development to use as their people, their governments and their political parties decide. We provide the means.

I sometimes say that we put the toolbox on the bench and you all use the tools in your own way. It is not for us to interfere with a country's development model. Each nation is entitled to its own development model, to its own inspiration, to its own system of alliance and to its own economic system.

"The Lomé Convention is a contract"

Secondly, the Lomé Convention is a contract, a contract which was negotiated just as individuals negotiate house rental agreements or purchase a property or a plane ticket. We negotiate together and our negotiations tend to be long and difficult. The forthcoming ones will be hard. When they are over, we sign. You Africans and we Europeans sign this contract and, once we have signed, the contract is binding and we, in the Community, cannot escape from it.

There is no way of avoiding our obligations. Once upon a time, and this is still common practice in some places, the rich countries decided on development aid. They decided what they wanted to give every year. Lomé has a different approach. There is a contract, an agreement between us. You know what you can expect and we have embarked upon a system of rights in preference to a system of unilateral concessions by the developed countries.



Mr Cheysson with President Sékou Touré

"A particularly warm welcome"

Facilitating "cooperation between neighbours"

Third, and this is the outcome of the first two, **the Lomé Convention is intended to facilitate cooperation between neighbours.**

Nothing is sadder, to my mind, than African countries devoting men and money to fighting each other or to defending themselves against each other.

Policy in West Africa has been exemplary in this respect in recent months. Although the countries in this part of the world have different regimes and different outlooks, their relations with each other are extremely harmonious.

Take the recent Monrovia meeting of five or six presidents. Take the President of Guinea's trips to so many countries of Africa. We Europeans hope to see this cooperation taken further. We think that anything that divides Africa is a threat to it and any threat to Africa is a threat to us.

We hope Africans can agree but, whatever happens, we shall not intervene in their affairs. This is Europe's policy. This is what the Lomé Convention stands for.

"We expect every nation to feel responsible for and master of its own destiny"

We leave it to each country to decide how to use our aid. There is an underlying principle here, which President Sékou Touré put this way: "Our people must feel responsible". And that is what we Europeans expect of Africans. **We expect every nation to feel responsible for and master of its own destiny.** We give you the means, but they are no more than means, and each nation of Africa must decide what to do with them. This is what unites them and is so important in their discussions with the Community.

These are the most important points which will come up during the coming negotiations. So we are at your disposal, with our present means and those which will shortly be settled for the future. And we are at your disposal for cooperation with all friends of the ACP countries, that goes without saying. In many countries we already have joint projects, cofinancing with other aid sources, with the UN, American aid, the EEC countries, Norwegian aid and Arab aid. Much Arab aid is used in combination with ours. These are the conditions in which we want to continue working for Africa.

Guinea played an important part in the first negotiations and the fact that it is one of the founders of the Lomé Convention is proof that the Convention is unaligned. The fact that now, two years on, Guinea thinks the Convention has been useful, is a source of satisfaction for us. But we hope that Guinea will play an important part in the forthcoming negotiations to ensure that the new convention is as I described it just now."

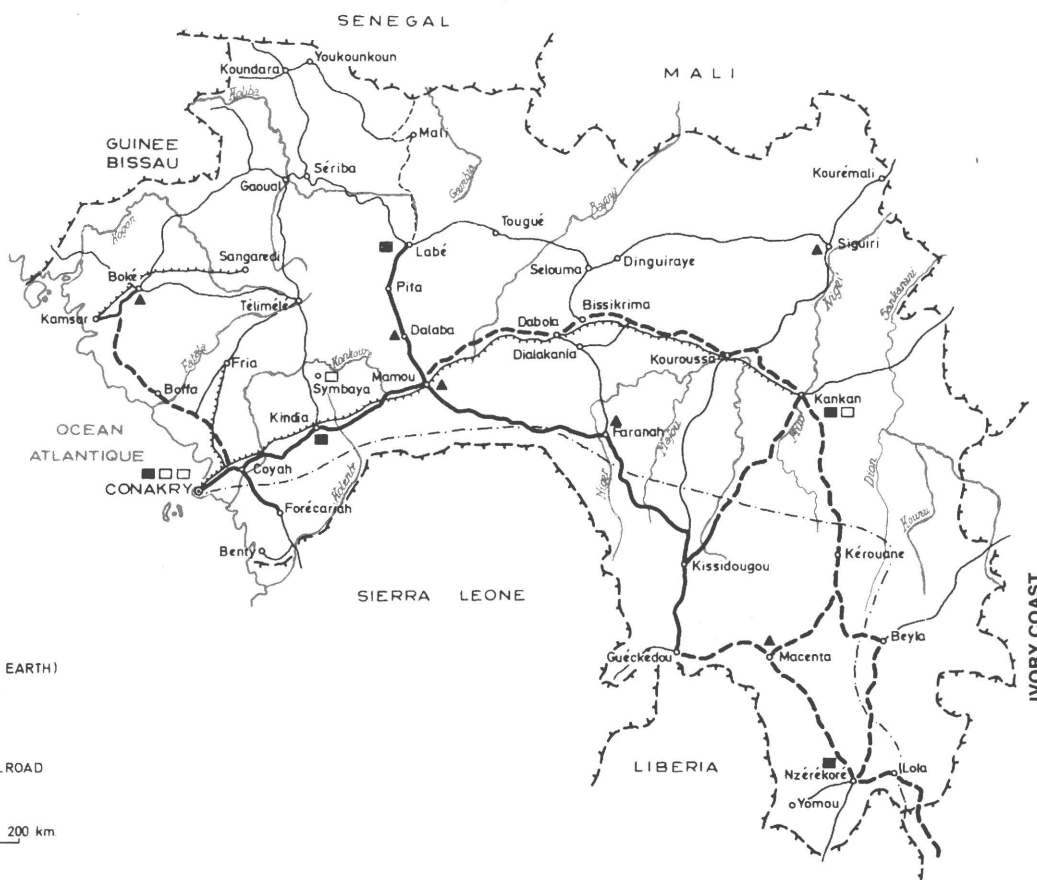
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Question time: the main points

Regional cooperation

"We are very much in favour of all forms of regional cooperation, cooperation between neighbours. I have emphasized the political side of the problem. We feel that understanding between neighbours is progress and contributes to development. And since our aim is to help you, we must, of course, encourage this understanding wherever possible. The second reason is an economic one. There are many projects that only have any economic

GUINEA



significance if there is a fairly wide market, enough room to move. So we want to be associated with projects involving several countries in the same area. For example, as I said, we are assessing the Kankan-Bougouni road project at the moment. When the road is built, it will be an opportunity to develop not just southern Mali but eastern Guinea as well.

A day or two ago, the Boké-Guinea Bissau road project was submitted to us; this is another means of linking two neighbouring countries. We have a great number of projects, many of them industrial, in other countries. We are helping with financing for a joint Togo-Ghana-Ivory Coast cement works. We are helping develop dams, one of them situated in Ghana but part of the hydro-electric network covering Togo and Upper Volta as well.

When a regional organization exists, we are very glad to collaborate with it. And we already cooperate with ECOWAS and a Togo-based fund which depends on this organization. We provide experts to look into statistical problems and we very much hope to be able to help finance certain projects put forward by ECOWAS, the bank or the fund.

Fisheries

Your waters are some of the richest in fish in the world and the exploitation of these stocks is clearly of great importance for Guinea's future. It must be achieved rationally. Your waters must not be overfished or the stocks will be depleted, and you clearly need to cooperate with your neighbours to prevent this. If their fisheries policies are different from yours and their waters are overfished, then your stocks will be affected too. So joint research is called for here to assess stocks decide when they can be fished and lay down conditions for fishermen from abroad and from your near neighbours in Guinea-Bissau and Sierra Leone to prevent depletion. And if you develop your fisheries sector, you will need us to help with training and finance boats and repairs facilities.

Then there are the joint industries, refrigeration and canning and so on. The future is promising, particularly as fish prices have increased more than those of any other resources in recent years. Oil has gone up and so have phosphates, but fishing rights have gone up more. This is a golden opportunity for Guinea.

The ACP group

This curious expression ACP, Africa, the Caribbean and the Pacific, was coined during negotiations with Europe. Around the negotiating table we had the whole of independent black Africa of the time and one or two Caribbean and Pacific countries and they decided to form a single bloc, the ACP. What is striking is that this bloc now goes beyond its relations with Europe. As you know, the ACP countries have for example, asked the United States to look into the possibility of an ACP development bank which would be a purely ACP affair and nothing to do with Europe. As I said, whenever there is cooperation between the developing countries, we are pleased, and we are proud to have been behind the ACP group.

The group has its own institutions. It has a Council of Ministers on which Guinea. I think, is represented by the minister for planning. It has its Council of Ambassadors where Guinea is represented by its ambassador to the EEC. Then there are periodic meetings between the ACP and the European Parliament, that is to say all the parties of Europe. The idea here is to keep our

political forces informed about ACP problems. And it is as a bloc that the ACP countries will be coming to the negotiating table for the next convention.

The weight of the Community

There are nine countries in the Community and all nine take part in UN debates in their own right. It is the nine countries and not the Community as such which belong to the UN. So they try to have similar positions. It is vital for them to succeed as, when they speak with one voice and all maintain the same position, they carry a great deal of weight in international proceedings. The western industrialized world is made up of the USA, Japan and the Community. If the Community has a clearcut position, similar to that of the developing countries, it means a lot to the Americans and the Japanese and the rest of the West. So we have considerable responsibility at international level when we nine speak as one.

Commodities

The Community is forced to adopt an audacious attitude here. It has to, because fluctuating **commodity prices** at the moment constitute one of the biggest handicaps to development. How can a country which produces raw materials plan its development if it does not know how much it can sell or at what prices? The developing countries have to know what their resources are before they can plan their development. This is perfectly obvious. And the opposite is also true. How can a developing country plan its development if it doesn't know the cost of the raw materials, particularly foodstuffs, it is going to have to import? Take a country like Algeria, or Guinea, or any other that has to import grain. What does this country do when all of a sudden grain prices double or treble? It sacrifices the rest of its development. This is intolerable. One condition of planned development is stable export earnings.

I should like to draw your attention to the fact that this is also in the interests of the European countries. We too are major importers of raw materials and sudden price fluctuations are very dangerous for us too. Copper is extremely low at the moment, but this means that it will go right up again tomorrow. When prices are low, investment stops and, as investment has stopped, there will be a copper shortage in a year or two. So speculation will start again and copper will go right

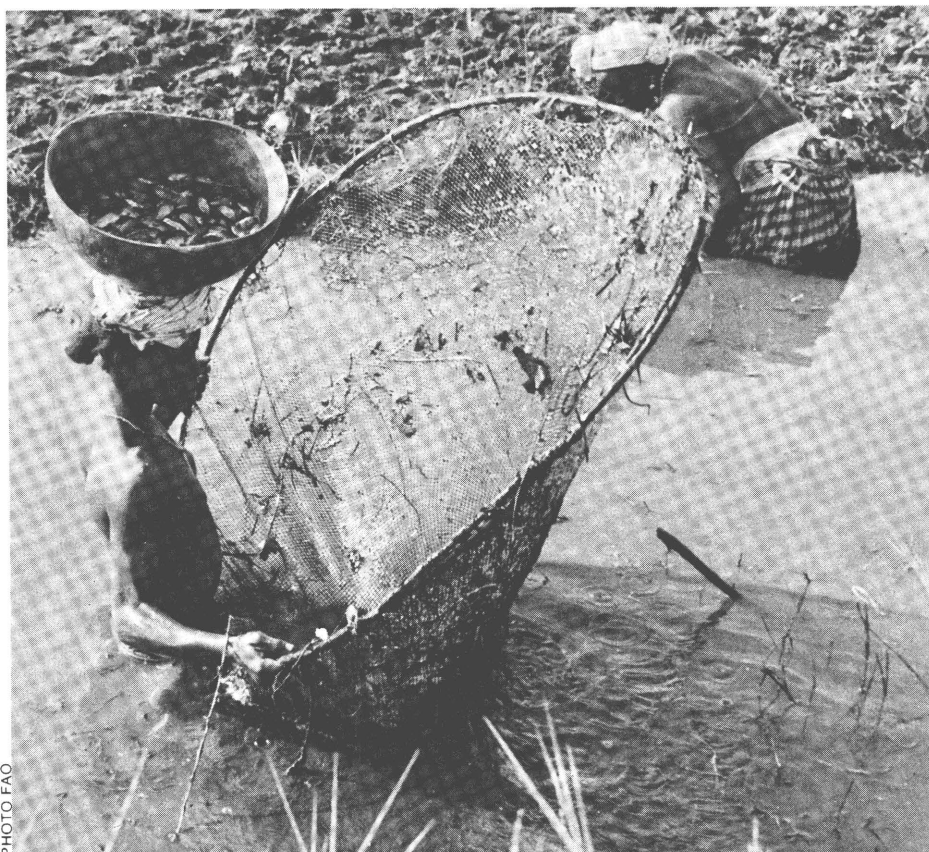


PHOTO FAO

Fish is one of Guinea's main resources; here women catch it in the traditional way

up. This too will be catastrophic for us. **So as far as raw materials are concerned, we small countries of Europe and the world's developing countries have common interests.** This is much less true of America, whose imports are small, and of the Russians, whose resources are vast. But it is very true of countries like the European ones and Japan which have inadequate resources of their own. So rapid progress is called for in the raw materials sector.

For the moment, we have an agreement in principle on the creation of a common fund to facilitate the financing of buffer stocks of various raw materials. Such an agreement exists and we must now put it into practice. In particular, we must decide which commodities the fund will cover. So, we need a copper agreement, a rubber agreement (this is not far away), a tin agreement (there is one but it needs adding to), an agreement on fibres, and so on.

In the meantime, in the ACP-EEC context, we have produced a kind of insurance for bad years in the case of agricultural products. Two years ago, the level of Mali's earnings from exports of hides and skins to Europe dropped and we paid the difference between that and the level of previous years so that the producers, that is to

say the peasant farmers and herdsman, suffered no loss of income. It is important for people, particularly when they are poor, not to suffer sudden falls in earnings. This system, called the Stabex, has worked well, but we must see during the negotiations whether it can be made even better.

Human rights

This is something I should like to be very clear about. I think progress is being made in our society in Europe today to the extent that public opinion is taking an interest in what is happening to people the world over. When there is news of a racial massacre or, for example, of South Africa's attitude to Soweto or the victims of Soweto, there is a real outcry in Europe. This is progress indeed. Ten or 20 years ago in Europe, we were only concerned with ourselves and we were quite indifferent as to what went on in Africa or Asia. But now Europeans take an interest in people all over the world. And there is understanding now, that certain practices are contagious. If Europeans accepted racialism elsewhere in the world, if they accepted racial or religious discrimination or class distinctions anywhere, they would soon see them cropping up in Europe too. And

this we do not want. We had one terrible war because of it and we do not want another. So, as we see it, there is a genuine surge of feeling when basic human rights are violated. I said basic. I don't mean political regimes or power systems.

What I am talking about is dignity, the right to live, to be respected, the refusal to accept discrimination for social, racial, religious or class reasons. This refusal has become a major political element, in our opinion.

And we think that when we define our cooperation with one part of the world, you, the ACP countries, it is as well to recall the reasons for such cooperation, not in the precise terms of the Convention, but in the declaration of intention which precedes it. I am happy to say this here in Guinea, where the state party's declarations on the respect of the individual and the rejection of any discrimination are so clear.

The report to be discussed at your next congress contains a whole chapter on the rejection of discrimination. So I feel very much in sympathy with the people behind your policy, by whom I mean the people of Guinea themselves, when I say that when we define our cooperation, it is as well to recall that we are cooperating to serve mankind.

The same challenge

I have been very privileged to spend many years of my life serving the developing countries. I began in Algeria just three days after independence and I spent four fascinating years serving that country as one of its civil servants. Before that I worked for independent African countries south of the Sahara—it was then I had the honour of meeting President Sékou Touré—with a small organization that now belongs to the OAU.

And it was when I was doing this work that I realized how much our problems and yours are linked. The challenge you are issuing with your will to develop, your will to become independent and to assert your own cultural identity is the same challenge we have in Europe in face of the consumer society, the multinationals and the superpowers.

We are at different stages of industrial development, but the cultural clash, the fundamental conflict with which we are faced, is the same. It is clearer in your case as you have just gained independence, often at the price of great suffering.

But, in the long term, it is the same conflict, the same desire for identity and independence.

So, if I am so often in sympathy with the countries I visit, it is because they are, to my mind, expressing the very problems of the society I belong to in Europe.

A new international order

When I talk about the new international order, I omit, as you will have noticed, the word "economic". This is because I think the issue goes beyond economics and takes in the whole range of relations. Will the countries of the Third World go on being marginal, excluded?

Or will they be participants and decision-makers in the world? For a whole century, the 'overseas' countries have been on the fringe, outcasts.

They could benefit indirectly from some kinds of progress in the industrialized world and they contributed to the economic progress of that world by supplying raw materials, as well as labour and markets on occasion. But they took no part in decision-making. They were marginal, the proletarians of

the world, if you like. And I do not use this term lightly. The phenomenon we have today is exactly that we had in our industrial society at national level in the 19th century. In the 19th century, we had the industrial revolution, led by the class which reaped the benefits, the class which used whatever labour it could lay its hands on without giving the labourers, the proletariat, the right of decision.

But the proletariat has gradually asserted itself and, in our society today, it helps decide and it enjoys the benefits of growth.

The same thing must now occur at world level. The proletariat must disappear from the world as it has disappeared from our individual nations. This is what is at stake.

But it will take time. Because the problems involved are complex, the structures are resistant and not all countries of the world have the same interests.

We Europeans are very dependent on our relations with Africa and we hope progress will be fast. But there are others who are less dependent and progress at international level will therefore be slow. So we must pledge ourselves to this progress. This must be one of the themes of our discussions."□

Revised of indicative programme

| EEC schemes | IP estimates (million u.a.) | Commitment | Revised programme (million EUA) |
|--|-----------------------------|------------|---------------------------------|
| I — Ongoing projects | | | |
| Rural engineering brigades | 15.00 | 14.30 | 14.30 |
| Health centres | 1.65 | 2.00 | 2.00 |
| IPS | 4.10 | 1.53 | 1.53 |
| Faculties of agronomy | 0.75 | 0.85 | 0.85 |
| IPS Maritime | 1.00 | 1.95 | 1.95 |
| Sub-total | 22.50 | 20.63 | 20.63 |
| II — Projects submitted or to be submitted for EEC approval | | | |
| Sanoyah textile complex | 28.00 | 30.00 | 30.00 |
| Soguiplast | 2.50 | | 4.00 |
| Microprojects | 1.00 | | 1.00 |
| Railway | 10.00 | | 5.87 |
| Mamou-Kankan road study | | | 1.20 |
| Cotton development | | | 1.20 |
| Grants | | | 0.10 |
| Total | 64.00 | | 64.00 |

BARBADOS

Depending on people ⁽¹⁾

How does a Caribbean island of a mere 166 square miles, with only 12 years of independence behind it and a population of a quarter of a million, manage to survive in the fierce economic competition of the modern world without the natural resources which so strongly influence the economic development of other ACP states?

Barbados' financial resources are slender. The country is heavily dependent on external trade. For the year 1977 the value of retained imports was BDS \$504.7 million⁽²⁾ while the value of domestic exports only BDS \$147.1 million, resulting in a trade deficit of BDS \$357.6 million and an increasing balance of payments problem.

The island's continuing survival is the result of good management of the resources which it possesses, its people, its good climate and its beaches. And the government is aware that meaningful economic growth is possible only when the social, economic and political affairs are managed to ensure

that the benefits redound to the advantage of the citizens of the country as a whole.

The country has to generate and maintain production by identifying and tapping all its resources including the creativity of its people. Indeed the Prime Minister himself remarked when he addressed the opening session of the Project Group meeting on Alternative Energy Sources, 'It can be argued that a country's resources are not fixed and in traditional areas only but are dependent on the capability of its inhabitants to identify, develop and put them to use. Indeed, it may be that the primary resource of any country is the basic human capacity of its citizens, and its development by appropriate educational processes to provide a significant reservoir of creative and constructive activity.'

Not only must new products be manufactured to meet export demand but markets must also be found for what is already produced. Every effort is therefore being made to ensure that Barbadian manufacturers and exporters are given the incentive to exploit the trade opportunities which are afforded them under the Lome Con-

vention and also under the various generalized schemes of preferences of the developed countries.

The major revenue earners are sugar and tourism, although in recent years some success has been achieved, largely as a result of Barbados' high reputation for quality, in agricultural diversification and industrialization. A 98% literacy rate has enabled Barbadians to adapt quickly to modern techniques and to cope with the demands of sophisticated technology and the island has therefore been able to attract such investments as the new Bayer insecticide factory and several new factories for manufacturing and assembling electronic components.

Three Barbadian companies recently received gold medals in Europe for their products: Mount Gay for their Sugar Cane Rum, Fine Old Liqueur and Refined Eclipse, Cockspun for their Five Star Rum and Banks Breweries for their Lager Beer. There will, no doubt, be more in due course.

In agriculture there has been in recent years a marked increase in production of a wide variety of vegetables which has seen the country becoming self-sufficient in some items and even an exporter of limited quantities.

The Barbados government hopes that the developed countries will support its efforts to stimulate exports by taking steps to remove some of the non-tariff barriers to trade which

(1) From the Delegation of the Commission of the European Communities in Barbados.

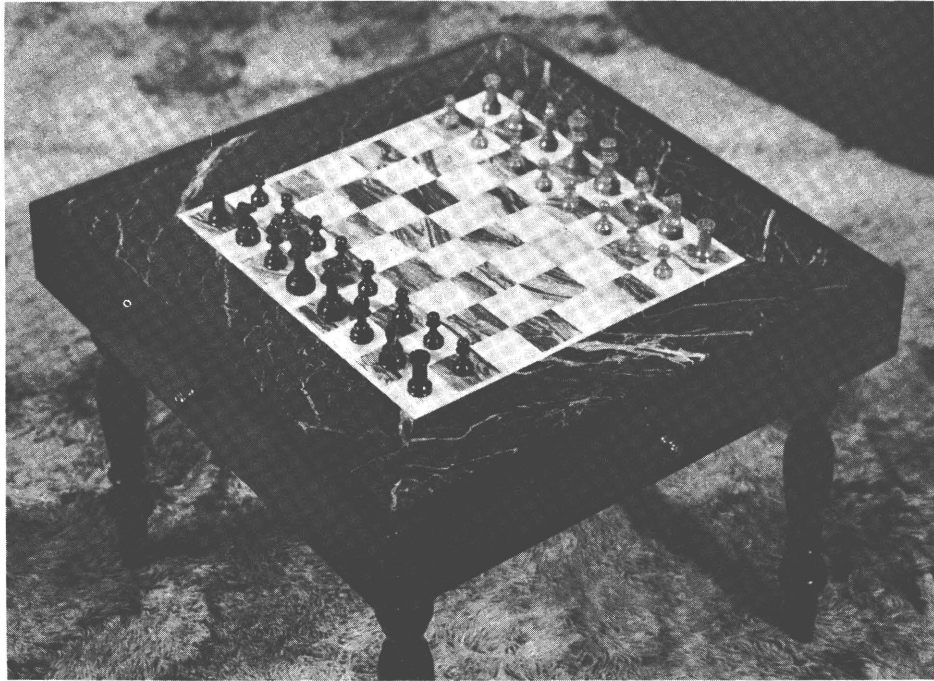
(2) BDS \$1 = 2.47 EUA (June 78).



Litchfield clinic — an EDF-backed health project

severely restrict the trade of developing countries, but already the country has seen tangible gains from its accession to the Lomé Convention. The new health clinic which has been built at Litchfield, St Peter, was completed in nine months and earned warm praise from the delegation of European Parliamentarians on their visit to Barbados in June, export and tourist promotion projects have been approved, training funds from the EDF have been widely committed, the project for the redevelopment of the main fishing port at Oistins has started to take shape and the design for a new Central Agronomic Research Unit, which will help in identifying the type of process and packaging best suited to the marketing of agricultural and agro-industrial products in Europe, is now being examined in Brussels.

Barbado's reputation as a tourist paradise is well known and the Government's intention is to ensure that tourism does not endanger the social and cultural fabric of the society, and that the tourist facilities remain available to



Partnership in furniture: a chess table made from Barbados mahogany and Italian marble



Barbados rum for the European market being aged at Mount Gay distillery

STATISTICAL SUMMARY

BARBADOS

General information

| | |
|---------------------------------------|---|
| — Political Status | Independent Member of British Commonwealth |
| — Population (1978) | 250 000 |
| — Area (km ²) | 430 |
| — Capital City | Bridgetown |
| — Language | English |
| — Climate | |
| — Air temperature (°C) | 18-32 |
| — Relative humidity (%) | 60-80 |
| — Currency | |
| — Designation Barbados Dollar (BDS\$) | |
| — Fixed Parity (July 1976) | 1 BDS\$ = 0.50 US\$ |

Economic indicators

| | |
|--|-------------|
| — Gross Domestic Product At factor cost (1977): | |
| — Total | BDS\$ 760 m |
| — Per Capita | BDS\$ 2 987 |
| — Originating from production: | |
| Wholesale and retail Trade | 23.7% |
| Government services | 15.9% |
| Manufacturing | 11.4% |
| Other services | 11.2% |
| Tourism | 10.9% |
| Sugar | 6.5% |
| Construction | 6.5% |
| Transportation and storage | 6.2% |
| Other Agriculture/Fishing | 5.0% |
| Mining/Refining and other | 0.5% |
| — Retail Price Index | |
| — Increase 1972-73 | 16.9% |
| — Increase 1973-74 | 38.9% |
| — Increase 1974-75 | 12.3% |
| — Increase 1975-76 | 5.0% |
| — Increase 1976-77 | 8.3% |

all the citizens of the country. The government supports local ownership and management in the industry and, recognizing that its expansion will require an additional supply of trained and skilled personnel, is placing emphasis on the training of Barbadians for middle and upper management posts.

Plans for tourism include a greater emphasis on research and the EDF is making a significant contribution to the government's efforts to reduce the seasonality of the industry by financing the study by the Caribbean Tourism Research Centre of the existing framework of the industry, on which plans for the future will be based.

Through the agricultural diversification programmes the government also seeks to establish linkages between the tourist and agricultural sectors of the economy by giving farmers the opportunity to produce the goods used in the hotels and guest houses.

But unemployment and inflation remain serious problems. Government, therefore, is strenuously pursuing policies in export manufacturing and tourism designed to stimulate economic growth and reduce the level of unemployment. In its search for cheaper imports, at the same time as it adheres to the regional arrangements under the Treaty of Chaguaramas (1973) which established the Caribbean Community and Common Market (CARICOM), the government carries out a continuing



Palms and beaches bring in the tourists

search for cheaper sources of supply of raw materials and finished products.

The battle for survival continues as government explores all possible avenues to economic development: a vigorous campaign to attract foreign investment from North America and Europe is being mounted to make optimal

use of the country's manpower resources and encouragement is given to the development of joint ventures between local manufacturers and businessmen and the foreign investor. Meanwhile Barbados' most important resource remains in the words of its Prime Minister, 'the basic human capacity of its citizens'. □



European parliamentarians on a visit to Barbados. From left to right, Sir Arnott Cato, President of the Barbados Senate; Giovanni Bersani; J.M.G. Adams, Prime Minister of Barbados, and Mrs Adams; Horst Seefeld; Colette Flesch; Mr and Mrs John Corrie

Transport and communications

First conference on ACP cooperation in Bangui

The first ACP conference on promoting cooperation within the group was realistic and perhaps prudent in fixing itself the limited, if not modest, aims of identifying the transport and communications problems facing the countries of Africa, the Caribbean and the Pacific and agreeing on a number of practical immediate and longer-term measures to overcome them. It achieved these aims.

ACP representatives, meeting in Bangui from 26 June to 1 July, discussed topics ranging from air, land and sea transport to the problems of telecommunications and the mass media in Africa, the Caribbean and the Pacific. They discussed the issues in depth and kept to their schedule. More important, they produced recommendations that are far from being mere pious hopes. However, the ACP countries maintain that the results of the conference can be improved upon and they may be so at ministerial discussions due to be held later.

There is no question of a lack of confidence or an admission of weakness here, but rather a desire to have as many guarantees as possible so as to avoid a failure which, as the ACP countries well realize, would considerably impede their attempts at close cooperation. This is why they are being so careful. Their idea is to advance slowly until they have completely realized the aims of the ministerial declaration in Suva (Fiji) on 14 April 1977 which laid down a six-point action programme for inter-ACP cooperation, covering:

- i) transport and communications;
- ii) trade cooperation;
- iii) the creation of inter-ACP firms and cooperation in the field of production;
- iv) development financing;
- v) techniques (know-how and technical assistance);
- vi) culture, science and teaching.

It was the first of these points that was discussed at Bangui. By giving priority to transport and communications, the ACP countries emphasized how important they were to the development process.

They set the example here, since the North-South dialogue in Paris and the UN in turn decided to discuss the issue and both organizations made it clear that the problem was an urgent one by declaring 1978-87 "transport decade".

Careful organization

The first ACP cooperation conference took a year of contact, consultation and careful preparation to organize. The ACP countries wanted to maximize their chances. So why did they choose Bangui, the out-of-the-way capital of a landlocked country in the middle of Africa, as their venue? It was a daring bet, double or quits, a cause for congratulation today but a source of apprehension for many up to the last minute. The poor air communications with Bangui caused delayed appearances and, in one or two cases, the total absence of delegates. It caused some to leave abruptly and wore others out. "We spent four days getting here", one delegate from West Africa said resignedly. The Botswana delegate got as far as Kinshasa only to find that the quickest route — which he took — from there to Bangui was via London and Paris, although Zaire and the CAE are neighbours.

Could there be any better illustration of the ACP transport and communications problems or of the urgent need to do something about them? The full implications of being landlocked came home to the delegates, meeting at UDEAC headquarters, and helped keep them alert. The CAE was aware of the handicap and did its utmost, by means of careful organization, to ensure that the conference was a success. As one of the organizers put it, "the Bangui meeting was, first and foremost, for us, the landlocked countries. And we were anxious for it to succeed". At all events, thanks to them, the representatives of 27 ACP countries, 10 regional and seven international organizations were able to devote their time exclusively to discussion of the items on the agenda, which was fortunate, as there were marathon debates, sometimes lasting well into the night. Luckily, a number of sound contributions from UNCTAD, the World Bank, the ITU, the



(l. to r.) Messrs. Kombot Naguémon, Central African Empire ambassador in Brussels and chairman of the conference; Magalé, CAE planning minister; and Rainford, Jamaican ambassador to the EEC



ACP secretary-general Tieoulé Konaté winds up the conference

ECA and the international civil aviation organization set the discussions along the right path.

ACP secretary-general Tiéoulé Konaté, thanked them for their collaboration and Edwin Carrington, his deputy, went further, saying, "you are the

driving force and we are the coordinators and administrators".

This is not to say that the conference was content to rubber stamp the documents produced by the various organizations. The different contributions provoked what was sometimes very vigorous discussion in both committees and plenary session.

And it took all the skill of Kombot Naguemon, CAE ambassador to Brussels, to prevent them from meandering off the main track. Ever alert, he proposed compromise solutions to overcome problems and make it possible to produce satisfactory summaries and his odd touches of humour never failed to relax the atmosphere. He was a first-class chairman and, for many, a prime contributor to the success of the conference.

The spirit of Suva

What did Bangui achieve? The results are substantial even before the final ministerial discussions which, according to Mr Rainford, Jamaican ambassador and chairman of the sub-committee on ACP cooperation, cannot be held before early 1979. The first and most important result is the strengthening of ACP solidarity, the reiteration of their desire for greater and deeper cooperation. At the end of the

conference, a Caribbean delegate, visibly moved, cried out: "the spirit of Suva lives!" And it is in the light of this ACP desire to establish genuine horizontal cooperation that the sea transport charter and the various resolutions adopted on the banks of the Oubangui should be analyzed. The privileged means of this cooperation, the vital intermediaries are, as the conference established, the regional organizations, which must now coordinate their actions, thereby considerably increasing their negotiating powers.

The most convincing example is the problem of sea transport. The ministerial conference of the states of West and Central Africa, CARICOM and SPEC (the South Pacific economic cooperation body) obtained important concessions as regards tariffs and the exploitation of certain routes from the Maritime Conferences. Once they have established organic links between themselves, they will carry much more weight and will be able to bring forward the application of the famous 40/40/20 rule of the code of conduct of Maritime Conferences (1).

There are similar plans for air transport organizations to cooperate on opening new routes between the three major groups of ACP countries in each group. Application of this measure could begin as soon as the ACP Council of Ministers has given its approval. There will also be cooperation on road-building and telecommunications. The many resolutions adopted have one thing in common: the major ACP concern of whether or not they can actually be implemented. And we must await this implementation to judge the results of this first conference. If, as the ACP states hope, many beneficial results are soon felt in the transport and communications sector, it will not matter that, as some were at pains to point out, not all the countries in the group sent delegates to the conference and not all the delegates that did attend were experts.

This, Mr Konaté said, will mean that "an important step forward was made at Bangui." □

AMADOU TRAORE



The first conference on ACP cooperation was attended by representatives of 27 ACP countries, 10 regional organizations and seven international organizations

(1) The 40/40/20 rule is an international convention, not yet in force, which proposes that the country the vessel comes from and the country it is going to each have 40% of the freight on the route in point and that third country fleets using the route share the remaining 20%. Both the Commission and the Member States of the EEC support the ACP demand to have this rule, contrary to what was originally intended, also apply to them.

Thoughts on the Bangui conference

Henri Maïdou,
deputy Prime Minister of the Central African Empire

"The gap between the industrialized countries which control the world commodity markets and the unfortunate developing countries which supply them is widening, faster and irrevocably.

As we see it, there is only one thing the poor countries can do. Get organized, cooperate more, particularly to safeguard the interests they could not defend alone, by introducing horizontal cooperation instead of vertical cooperation, with its all too familiar results.

Our countries, our states, are well able to do this. The spirit of cohesion, comprehension and coherence they have shown and which culminated in the signing of the Lomé Convention is the most patent example of it.

The ACP conference at Bangui is in line with this and aims to perpetuate this spirit."

o o o

Donald Rainford,
Jamaican ambassador to the EEC and chairman of the ACP committee on cooperation

Our recommendations have been extensive and in many cases, specific and practical. We have conceived of the machinery for their implementation, and of procedures for further deliberations. We have recognised our limitations and identified our strengths. During it all, we have established and re-established contacts among different members of the ACP family, at the country, the institutional, and the personal levels. Indeed, I am reminded that the personal includes official and private. Ladies and gentlemen, in a family such as ours, both are necessary.

The recommendations of our Conference must now go to our Sub-Committee on Intra-ACP Cooperation for transmission to our Council of Ministers through our Committee of Ambassadors. We hope to do this speedily, and look forward to early deliberations on our recommendations by our ministers,

and to submission of their decisions to all ACP countries and relevant institutions for implementation.

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Romano Lantini,
representing the EEC Commission

"The five days' work at Bangui were, we feel, fruitful, as is apparent from the intense activity of the three *ad hoc* technical committees set up on the first day.

The African transport decade, under the auspices of the UN and the Economic Commission for Africa, has just begun. Its main aim is a difficult but vital one and should enable an overall transport strategy to be devised.

The geography and the economic development of Africa mean that there are considerable needs, I should even go so far as to call them imperatives, in this sector, which demand huge investments and the programming of very considerable operating and maintenance costs.

Being landlocked is now a greater brake than it was in the past. Trade has replaced a subsistence economy and access to foreign markets has become a fundamental factor of economic development. Growth depends, among other things, on having modern communications extending beyond the national territory and regulated by inter-state agreements and measures."

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Mr Willoughby,
head of the transport projects department at the World Bank

"Can the World Bank help inter-ACP cooperation by priority financing for regional projects? The Bank already finances regional projects sometimes. It is not, perhaps, so well equipped as the EDF, which has special funds for this type of project, but it has financed many regional projects, purely regional ones like the railway, port and telecommunications projects in the former East



Christopher Willoughby

African Economic Community. And then there are fairly common cases where the Bank finances regional projects by giving loans to both countries concerned at the same time. A conference like this in Bangui can help in the planning of regional projects, since the main thing is to decide which sectors lend themselves best to projects of this type and to overcome any obstacles, particularly political ones."

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Ousmane Gueye,
head of the ECA transport division

"The Bangui conference and the meetings we are running in Addis Ababa and elsewhere on the African transport and communications decade are complementary. The meetings are mainly concerned with Africa, since this is the region we cover.

The ACP conferences cover the three regions in that group. But our results complement each other. At the level of

**Our recommendations have been extensive and in many cases, specific and practical
We have conceived of the machinery for their implementation, and of procedures for further deliberations
(D. Rainford)**



Ousmane Gueye

the ECA, you have Africa's position and aims and an attempt must be made to coordinate them with ACP aims, as Africa is taking part as a partner in the ACP group. We think the Bangui conference will have been useful, since one of our aims was to get the ACP to state their objectives for the transport and communications decade, as far as Africa was concerned in any case, and to avoid the conference having responsibilities and aims that differed from those Africa had already fixed, so that the ACP countries can help us by bringing all their means into play to make the decade a success."

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Laouyane Ahmed, counsellor to the ITU

"The Bangui conference revealed the weakness of telecommunications in general and the Panaftel network in particular. The main problems are to do with the financing of certain trunk lines and the schemes to complete Panaftel i.e. expert appraisals, vocational training for staff to set up the rest of the network and to maintain and

exploit it. All this requires a very considerable financial effort. The UNDP is doing a great deal, but it cannot satisfy all the demands of this technical assistance programme. This is why we at Bangui emphasized the need to see how far the general secretariat of the ACP group could obtain the means of financing these complementary schemes. Bangui also highlighted the need to establish links between the ACP sub-groups, i.e. between Africa and the Caribbean and Africa and the Pacific. This should obviously be taken into account in the modernization of the Panaftel network."

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Mr G. Dedeystère, UNCTAD sea transport division



"Although the developing countries, as a group, account for 60 % of loading and 18 % of unloading of merchandise in international sea trade, they only account for about 8 % of the tonnage of the world merchant fleet (excluding flags of convenience). Their stated aim, set out in a number of UN resolutions, is to obtain at least 10%. A recent estimate suggests that it would take

\$2-3 million p.a. to do so, and considerable investments will therefore be called for to achieve this modest objective. So it would appear that the developing countries, as a group (and I think this also applies to the ACP group), will go on being primarily users or buyers of sea transport services for some time to come."

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Mr Dancak, ICAO delegate



"The developing countries, particularly those in Africa, are increasingly anxious to decide just what new contribution aviation can make to their economic development.

The International Civil Aviation Organization sees the point of the ACP countries studying the airline networks serving their countries and it also recognizes their desire to develop more direct lines between the countries in the group. The basic documents have already been written. I think the next step should be to analyze the socio-economic aspects and the prospects of marketing air transport, to assess the real needs and draw up an overall plan for basic, horizontal infrastructure." □

THE CONVENTION AT WORK

Negotiations open on new ACP-EEC convention

The ACP: "seeking a significant step forward"

The formal opening of Lomé renegotiations between the ACP countries and the EEC took place on 24 July in Brussels. The three speeches, from Mr Patterson, chairman of the ACP Council, Mr Genscher, chairman of the EEC Council⁽¹⁾, and Mr Jenkins, president of the EEC Commission, marked just the beginning of what looks as though it will be a long period of bargaining between the two sides. It is true that the talks open in an atmosphere of partnership and good will, but, as Mr Patterson said in his speech, the existing convention is not an end in itself. The ACP countries were not seeking "cosmetic" changes but a "significant step forward". He pointed, too, at issues where there may be disagreement—human rights, investment guarantees and fishing. The real negotiations will not start until September, and

(1) Percival Patterson is the Jamaican foreign minister and Hans-Dietrich Genscher, the Federal German foreign minister. During his speech, Mr Patterson introduced his successor as president of the ACP council, Mr Siane Tapa, finance and health minister of Tonga.

if all goes smoothly could be over by next spring. Such a timetable, Mr Patterson said, would allow the ratification procedures to be completed and a new convention to come into force by March 1980.

United ACP front

Mr Patterson began by referring to the unity of the ACP group, which, "though separated by geography and the accidents of colonial conquests, have come fully to recognise the value of forging a common bond". He also referred to the Khartoum OAU summit's call to the EEC to "show more determination and political will in its relations with the ACP".

Mr Patterson observed that the ACP group had grown by seven since 1975, and would welcome nations who "have acquired sovereign status and others whom we hope will soon succeed in their legitimate struggle for national

liberation". Mozambique, however, which is watching the new negotiations with interest, did not attend the opening ceremony as an observer. The ACP chairman made it clear that he wanted the negotiations to be innovative, and called on the EEC to provide "an effective basis for our continued cooperation" by overcoming its "regrettable reluctance" to take "that necessary step forward".

The concept of interdependence

Mr Patterson made a point of referring to interdependence between the EEC and ACP, a concept, he said, that was gaining increasing acceptance from politicians and economists alike. "We do not come to this negotiating table helpless, empty-handed and impotent", he continued. "Our value lies not only in the raw materials we produce, which are essential for your industrial processes, the EEC has a vital interest in supporting the economic and social development of the ACP countries because our markets are essential to facilitate conditions of growth for your economies".

ACP group's guidelines to negotiations

Against this background, Mr Patterson indicated the main principles that

Also in the yellow pages

The Convention at work

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IV. EDF financing agreements signed

VIII. The Solomon Islands' independence

X. ACP sugar

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XI. The OAU Summit in Khartoum

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European Community

XIV. European Council in Bremen

XV. Bonn economic summit

CID

XVII. Business opportunities



The two presidents: Mr Patterson (right) and Mr Genscher (left)

would guide the ACP group. "In the first place, the new agreement which we expect to result from these negotiations will be of fundamental importance to the future relations between ourselves and the Community. We therefore cannot afford to sacrifice the achievement of fundamental objectives through undue haste.

"Secondly, any eventual agreement between us must be based on strict respect for equality between partners. We cannot, therefore, tolerate the inclusion of any provisions which could, by any interpretation, be used by either party to compromise the sovereign right of a state to conduct its own affairs in the way it judges appropriate.

"Thirdly, the relations between the Community and the ACP should not serve to hinder the maintenance or impede the development of our relations with the rest of the developing world. What we are seeking to achieve is the creation of an arrangement which would pave the way and set an example of precisely that new system of international economic relations that the Group of 77 has been seeking to negotiate with the developed countries.

"In building this new arrangement, we believe that progress can only be achieved if, first of all, the value of the unique experience of the Lomé Convention is fully utilized and developed. Therefore any new arrangement, to be acceptable to the ACP, must incorporate the beneficial features enshrined in the key principles of the Lomé Convention.

"The second critical requirement of the new arrangement is that it must of necessity include progressive elements, reflective of the concerns and aspirations of the developing world in the quest for a new international economic order. As regards the beneficial effects of the Lomé Convention, we view, in relation to our trade cooperation, the retention of the now near-universal principle of non-reciprocity in trade preferences between developed and developing countries as an indispensable principle. We believe however, that the present situation which limits the duty-free access to only a portion of our exports should in the new arrangement be replaced by provisions which allow **all** ACP originating products to be imported into the Community free of quantitative restrictions, customs duty, and charges having equivalent effect, subject only to the condition that such treatment is not more favourable than that granted by the member states among themselves.

"Where the latter situation exists and special arrangements need to be made,



The opening on 24 July of the negotiations for a new ACP-EEC convention

we would wish the Community to enter into long-term contractual arrangements which would dispense with all types of uncertainties and their economic consequences, such as have been experienced under the Lomé Convention by countries dependent on the export of such commodities as beef and veal. The present rules of origin impose too stringent a restriction on our products, particularly our manufactured goods, to qualify for the benefits of free entry to the Community markets.

"... Similarly, as the Lomé Convention recognises, effective market access is not merely a question of the absence of barriers to trade. The new arrangement must therefore provide measures for active trade promotion, by assisting ACP states to develop their export products through all stages, from production to consumptions."

Wider Stabex coverage

Mr Patterson recognized the value of Stabex, but called both for the widening of product coverage and the lowering of qualifying criteria. He asked, too, for recognition that the Community's financial assistance should "be significantly improved in quantity and quality".

"Finally, to ensure the most appropriate and satisfactory use of the financial resources for development, we propose, in future, the joint manage-

ment of these resources. Our experience, and our relationship as equal partners, no less than accepted international principle and practice, make desirable and necessary the adoption of such procedures. The achievement in this area will certainly be a measure of the Community's resolve".

A code of conduct for foreign companies

Mr Patterson called for improved industrial cooperation and listed new areas where cooperation could be developed. Among these were:

- scientific and technical cooperation;
- building up the ACP merchant marine.

Finally, Mr Patterson mentioned fishing, investment guarantees and human rights. He believed bilateral negotiations on fishing were desirable and that investment guarantees were part of "the wider sphere of negotiations dealing with transnational corporations, which would have to include a code of conduct for foreign companies". He described the ACP group's view of human rights in the following way. "Let me state that our concern for human rights is no less than yours. But we have decided, by resolution in Lusaka last December and in March this year, and affirmed in our meeting on Saturday of last week, a unanimous view that this has no place in an agreement

that deals with trade and economic cooperation. We are all members of the United Nations. We subscribe to the Charter of that body and to the resolutions which have been passed in a forum which has the necessary legal competence."

Mr Genscher: no sweeping changes, but "adjustments and improvements"

Mr Genscher, speaking for the EEC Council, saw the negotiations as extending cooperation." The Convention has proved itself in practice", he said." The negotiations will therefore not deal with sweeping changes or renovation, but with adjustments and improvements. In the process, the Community aims to make it even more clear that the ultimate purpose of cooperation is to serve people and help them secure their dignity, and rights, as human beings, to freedom from hunger and hardship."

Mr Genscher then went through the list of areas he believed the negotiations should cover:

- **Human rights:** the EEC's relations with the ACP states must "be founded on the principles which form the cornerstone of liberty, justice and peace in the world, as incorporated in the United Nations Charter and the Universal Declaration of Human Rights". The EEC stresses the "very great importance it attaches to respect for basic human rights" and hopes that the new Convention will help to improve Man's condition in the ACP States.

- **Trade arrangements:** the EEC proposes renewing these arrangements, but the "virtually complete" opening of European markets to ACP products must "be coupled with guarantees vis-à-vis the Community". The wording of the safeguard clause should be maintained, subject to some minor amendments to harmonize the text with that of agreements concluded by the Community with other developing countries. In addition, the EEC proposes that the new Convention should contain provisions relating to "abnormal competitive practices such as dumping and export subsidies". The EEC will ask the ACP countries to continue not to discriminate between the member states, and to grant the EEC treatment which is not less favourable than that applied to the most favoured non-member nation (with the exception of the developing countries).

- **Trade consultation measures:** the conditions and methods of application should be strengthened and clar-



Mr Patterson making his speech. On the right Mr Nkowan, chairman of the ACP Committee of Ambassadors and on the left Jamaican ambassador Donald Rainford

ified (the obligation is mutual). According to Mr Genscher, these consultations could take place in the case of actual disturbances or threats of serious disorders in the industry of one of the parties concerned so as to prevent a "sudden application" of the safeguard clause (but without completely ruling this out).

- **Trade cooperation:** this could be improved, and the EEC proposes that the provisions of article 13 be expanded to make it clear that trade promotion is possible from the production stage.

- **Fishing:** the provisions of the annex to the Convention on this subject should be modified and appropriate methods should be applied to the development of cooperation in this sector.

- **Stabex:** the EEC proposes consolidating existing provisions, while reserving the possibility of suggesting some amendments, on the basis of any ACP proposals.

- **Industrial cooperation:** considering that experience in this field is relatively limited, the EEC proposes consolidating the existing provisions, and suggests consultations to improve and update the information available to the two parties.

- **Investments:** Mr Genscher proposes a provision whereby the contracting parties assert the need to promote and protect each other's investments, as well as the importance of concluding reciprocal agreements on the promotion and protection of investment.

- **Financial and technical cooperation:** this must be consolidated, tak-

ing account of the adjustments which experience has shown to be necessary. The sum of the credits will be fixed at the "appropriate time".

- **Less-developed countries:** the EEC considers it important to specify the role of aid programming in the ACP states' development strategy.

- **Regional and inter-regional cooperation:** if the ACP states so wish, the EEC is prepared to increase the proportion and total allocated to regional cooperation. Co-financing is of special interest.

- **Micro-projects:** after two years of experimenting with this type of financing, the EEC is ready to pursue such programmes.

Mr Jenkins: Lomé "not perfect"

In a brief speech, Mr Jenkins, on behalf of the Commission, encouraged the delegates to build on what had been achieved.

"It is vital for the Community "he said", to find common ways, together with the developing countries, to set up new types of relationships between the countries of our world. I believe that the Lomé Convention, although it is only a step in that process, has made a major mark on the history of those relationships. ...

The Lomé Convention is not a perfect treaty in a perfect world. The world has changed since 1975 and we must recognize this. We need to make the necessary improvements and find imaginative ways of combating our respective problems". □

Halfway through the Lomé Convention:

Comments by the Ambassador of Jamaica

The *Courier* apologizes to Jamaica and the other ACP sugar producing countries for misleading information which appeared in an article on the Lomé sugar protocol in the dossier "halfway through the Lomé Convention" of issue no. 50. The following paragraph appeared:

"Then, some ACP countries (Jamaica, Surinam and Tanzania) have turned to Cuba, Brazil and India for their supplies while others export extremely low-priced sugar to the world market". (p. 24.)

The Ambassador of Jamaica, Mr Donald B. Rainford, has asked us to point out that:

"This assertion seems to imply that Jamaica is not a sugar producer, which is clearly not the case. Jamaica produces about 300 000 tonnes of sugar a year. In 1977 Jamaica imported 15 000 tonnes of refined sugar, mostly from Cuba (10 000 tonnes at a very favourable price) and 5 000 tonnes from France, and exported about 200 000 tonnes of raw sugar".

Ambassador Rainford also explained that "the importation of refined sugar by Jamaica was a temporary measure due to a lack of local refinery capacity, but that this was now being expanded to meet anticipated demands over the coming years. It was pointed out that local food-processing industry, such as soft drinks, condensed milk, fruit juices, etc., which were important foreign exchange earners, were dependent on a stable supply of refined sugar and in order to avoid any reduction in production levels with the consequential loss of foreign exchange earnings and increasing unemployment, Jamaica had to import small quantities of refined sugar.

It was pointed out by the local Sugar Industry Authority that bids were invited from a number of brokers for the supply of refined sugar and in all cases only the lowest bid was accepted. Between 1974 and 1978 small quantities of refined sugar were obtained from Canada, Cuba, France and the United Kingdom". □

decided on several transfers. These concern 6 ACP countries (Benin, Comoros, Djibouti, Guinea-Bissau, Upper Volta, Niger), relating to 10 products (groundnuts, groundnut oil, palm oil, palm-kernel oil, cotton, timber, hides and skins, copra, cloves, ilang-ilang). The total amounts to 17.2 million EUA.

All these transfers go to countries in the group defined by the Lomé Convention as the least favoured countries, compensating losses resulting from changes in production arising from local conditions. This confirms the observation already made in the operation for 1976: it is the poorer countries which are the most exposed to the risk of a fall in export earnings because of the precariousness of production conditions, added to market factors.

The Commission has made a further decision for the year 1976 for an amount of 848 400 EUA for Mali for a fall in export earnings from gum arabic.

Senegal receives an advance of 19 million EUA for 1978

For the first time the provision in the Convention for the possibility of an advance on losses in estimated earnings for the current year has been applied. This advance goes to Senegal, whose 1977-78 groundnut harvest has been catastrophic. The transfer of a sum of 19 million EUA (the biggest since Stabex started) comprises 16 m EUA for losses from groundnut oil and 3 m EUA for losses from groundnut cake.

EDF AND STABEX

Signature of 27 EDF financing agreements and first Stabex transfers for 1977

On 17 July 1978, 27 financing agreements of a total value of 90 million EUA(1) of the European Development Fund were signed in Brussels. On the same occasion, the first agreements for transfers for the 1977 operation of the Stabex scheme were signed, as well as a further agreement for 1976. The transfers concerned 6 ACP countries, covering 10 products, with a total value of 17.2 million EUA.

The agreements under the 4th EDF

Taking into account the latest financing decisions on projects and the decisions on the stabilization of export earnings, 44.5% of the financial resources of the Lomé Convention (EDF and European Investment Bank) are now committed.

If only the EDF is considered, without Stabex, this figure reaches 46.3%. It is even higher (48%) if only ACP national projects are considered, excluding regional projects and emergency aid.

The latest financing decisions concern a great number of rural development projects, among them several integrated rural development operations—altogether more than 36% of the EDF aid projects.

There is also a decision of emergency aid for Botswana, to help in its struggle against foot and mouth disease, as well as approval for three regional projects: industrial cooperation for Sierra Leone-Liberia, a regional telecommunication project in the Pacific and a study on tourism in the Caribbean.

First Stabex transfers for 1977

Taking into account falls in export earnings in 1977, the Commission has

EDF financing decisions

Commitments from the fourth EDF totalled 1 266 079 000 EUA following the favourable decisions taken by the EDF Committee at its 127th meeting and the corresponding decisions taken by the Commission.

The following projects were involved:

Somalia

Integrated training scheme for the new port of Mogadishu

Grant from fourth EDF: 700 000 EUA

1 EUA = So.Sh. 7.161

The Somali government is at present developing its land and sea transport and communications capacity. The construction of the new port of Mogadishu is part of this policy.

The Community scheme includes the provision of training experts for Somalia, the grant of training scholarships

(1) Of which 14 m EUA on the 3rd EDF.

and the supply of teaching equipment. The EDF financing will amount to 700 000 EUA (grant) and will enable this programme to be carried out over two years.

Fiji, Tonga and Western Samoa

Telecommunication training centre complex at Suva, Fiji

Grant: 1 500 000 EUA

1 EUA = F \$ 1.082

The governments of the South Pacific countries, represented by the South Pacific Bureau for Economic Cooperation, have a policy of upgrading and expanding regional and national telecommunications services as a matter of high priority.

The project financed by the Community is for the construction of a complex of permanent building on a site provided by the Fiji government.

The EDF participation will take the form of a 1 500 000 EUA grant.

Lesotho

Village water supplies

Grant from fourth EDF: 700 000 EUA

1 EUA = R 1.064

The project financed by the Community will enable some 50 villages throughout Lesotho to receive improved water supplies.

The project is part of an overall development programme for the rural sector.

The Community contribution will cover:

- the purchase of materials, equipment and vehicles;
- payment of the skilled labour.

The 700 000 EUA will be made over to the Lesotho government in the form of a grant.

Ivory Coast

Grand Béréby hevea plantation (second instalment)

Special loan from fourth EDF: 4 855 000 EUA

1 EUA = CFAF 279

The Ivory Coast authorities have decided to continue with the operation to set up a 3 500 ha hevea plantation in south-west Ivory Coast.

It is estimated that such a plantation will produce around 31 000 t, approx-

imately 0.3% of world production. The first instalment of 7 000 ha has already been established. This EDF scheme is for the establishment of a further 6 500 ha plantation between 1978 and 1982.

The Community will contribute towards this project by providing a special loan of 4 855 000 EUA, to cover: the establishment and maintenance of further 6 500 ha;

maintenance of the existing 7 000 ha;

the setting up of small village plantations;

the construction of the first instalment of the latex factory.

Caribbean (Caricom)

Field facilities for the Caribbean Agricultural and Research Development Institute (CARDI)

Grant: 1 500 000 EUA

1 EUA = EC\$ 3.279

CARDI is an agricultural research and extension body covering the Caribbean area.

The Community financing for this regional project involves a 1 500 000 EUA grant to provide facilities for a large number of outreach centres of the Caribbean Agricultural and research Development Institute (CARDI). These facilities will enable CARDI to carry out more effectively its research and extension services work by providing the farmers of the Caribbean with the basic know-how to upgrade the level of production.

CARDI, which is an autonomous institute affiliated to the University of the West Indies, operates on contributions from the Member States of CARICOM(1).

Upper Volta

Volta valleys development, first instalment

Grant from fourth EDF: 1 857 000 EUA

1 EUA = CFAF 279

The reclaiming of onchocerciasis-free land was an essential objective of the second plan (1972-76). It was as part of the drive for rational and intensive development of such areas that the Upper Volta government requested a 1 857 000 EUA grant from the Community.

(1) Barbados, Guyana, Jamaica, Trinidad and Tobago, Anguilla, Antigua, Belize, Dominica, Grenada, Montserrat, St Kitts-Nevis, St Lucia and St Vincent.

The project financed by the EDF involves settling, over two years, 350 families in the Mogtédou-Bombaré area, 80 kilometres south-east of Ouagadougou. The Community financing is principally for:

land clearance work;

agricultural infrastructure;

the operations to transfer the families concerned.

Madagascar

Development of nut-growing

Grant from fourth EDF: 5 757 000 EUA

1 EUA = FMG 288.2

The 5 757 000 EUA grant from the Community to Madagascar is aimed at continuing the development of nut-growing, the first 3 500 ha instalment having been financed from the resources of the second EDF.

This new EDF operation will enable the Malagasy authorities, over a period of seven years, to:

cover the investment costs for the first plantation during the period before it becomes fully productive;

plant an additional 2 000 ha, including 400 ha of village plantations;

install the equipment required for processing the nuts.

The total area of 5 500 ha (existing 3 500 ha plus further 2 000 ha) will produce around 14 000 t of copra (approximately 9 500 t of oil).

Cape Verde

Project for soil development and protection in the João Varela area

Grant from fourth EDF: 557 000 EUA

1 EUA = Esc. 41.73

The project is intended to create the conditions favourable for implementing rural development, based on the optimum use of the water resources (surface and ground water) in the João Varela area, in order to improve the living conditions of the pastoral population in the region, while providing a regular supply of vegetable and animal products for the neighbouring town of Praia.

The scheme financed by the Community will involve the development of:

50 ha of land for market gardening;

400 to 650 ha for food crops;

2 000 ha for grazing;

the supply of drinking water to ten or so villages and hamlets.

A 557 000 EUA grant has been earmarked to finance the first phase of the project, which will last one year.

Tonga

Line of credit to the Tonga Development Bank

Loan on special terms from fourth EDF: 130 000 EUA

1 EUA = T\$ 0.8802

This Community financing is for the opening of a 130 000 EUA line of credit to the Tonga Development Bank (TDB) in the form of a loan on special terms for on-lending to small and medium-sized enterprises.

The Tongan authorities attach great importance to this project, for they consider that the bank is the vital instrument for promoting effective industrial and agricultural development of the country.

Western Samoa

Line of credit to the Development Bank of Western Samoa

Loan on special terms from fourth EDF: 890 000 EUA

1 EUA = WS\$ 0.8628

It is at the request of the government that the Community is providing the Development Bank of Western Samoa with a 890 000 EUA loan on special terms.

The government hopes that this bank will take an active part in the implementation of the Five-Year Plan (1975-1979) by making credit available for all projects aimed at expanding the country's productive capacity, particularly in agriculture.

Fiji

Line of credit to the Fiji Development Bank

Loan on special terms from fourth EDF: 700 000 EUA

1 EUA = F\$ 1.082

The Fiji government envisages the Fiji Development Bank (FDB) taking a very active part in the implementation of the Seventh Development Plan (1976-80).

This financial institution provides credit for all projects that expand the country's productive capacity, particularly in the agricultural sector.

The Fijian authorities have requested that a line of credit be opened to increase the Fiji Development Bank's operational capacity, particularly in the commercial and industrial fields.

The EDF is granting a 700 000 EUA loan on special terms to finance this line of credit.

Mauritania

Multiannual training programme (1970-80)

Grant from fourth EDF: 370 000 EUA

1 EUA = UM 52.22

The Mauritanian government attaches great importance to education and training. In this sector the main aims of the Third Plan (1975-79) are as follows: to ensure that the demand for labour is met;

to promote the employment of Mauritanian nationals;

to increase the rate of school attendance.

The authorities will receive a 370 000 EUA Community financing in the form of a grant to help them achieve these objectives.

Sudan

Multiannual training programme (1976-80)

Grant from fourth EDF: 5 million EUA

1 EUA = LSd 0.49

To enable training to play an official role in socio-economic progress it must meet the specific manpower requirements in key sectors (agriculture and agro-industry).

The 5 million EUA Community financing in the form of a grant will meet the Sudanese government's requirements in this sector perfectly.

Central African Empire

Multiannual training programme (1976-80)

Grant from fourth EDF: 1 170 000 EUA

1 EUA = CFAF 279

The dearth of qualified managerial staff is recognized in the economic and social development plan for 1976-80 as one of the major obstacles to development.

For this reason an education and training programme has been put into effect (the accent being on technical training). The Community will finance this training programme by providing a 1 170 000 EUA grant.

Sudan

Babanousa railway

Grant: 3 million EUA

Special loan: 6 million EUA

(Fourth EDF)

1 EUA = LSd 0.468

According to Sudan's 1978-83 development plan the country's economic growth will come from the agricultural sector, but this implies the existence of more reliable communications with a greater capacity.

In order to permit the western districts of the country to be developed, it is vital to modernize the Babanousa-El Rahad railway line.

The European Community is therefore providing a 3 million EUA grant and a 6 million EUA special loan to enable:

the present track to be replaced; signalling systems to be improved; flood protection structures to be built.

Zambia

Sites and services scheme

Loan on special terms from fourth EDF: 2 400 000 EUA

1 EUA = K 0.888

The Zambian government is at present following a policy of decentralization, intended to facilitate and encourage rural development.

The project consists of providing 1 000 site and service plots for the construction of houses in six rural towns in Zambia. The plots will be allocated to low-income families. House type plans and a building materials loan will be made available to the families in question.

The European Community is providing a 2 400 000 EUA loan on special terms for this project.

Congo

N'Kayi hospital

Grant:

second and third EDFs: 74 760

fourth EDF: 1 635 240

1 710 000 EUA

1 EUA = CFAF 279

The town of N'Kayi is situated in the Niari Valley and forms part of the Niari health area, which has 125 000 inhabitants (10% of the total population). The Congolese authorities hope to be able to meet the increased demand for medical care by building a secondary hospital combining preventive and curative medicine with the care of in-patients and out-patients.

The project presented by the Congolese government will be wholly financed by the Commission by means of a 1 710 000 EUA grant, 74 760 EUA of which is from the second and third EDFs and 1 635 240 EUA from the fourth EDF. □ (See also page X.)

First loan to a Pacific country

The European Investment Bank has granted a loan of 12.5 million EUA(1) for a power supply scheme in Fiji.

It has been made available to the Fiji Electricity Authority (FEA), a public body responsible for electricity generation and distribution, for 15 years at an interest rate of 5.15%, allowing for a 3% interest subsidy drawn from the resources of the European Development Fund.

This is the EIB's first lending operation in the Pacific under the Lomé Convention.

The loan will help to finance a hydroelectric scheme on Viti Levu island costing at around 73 million EUA and involving a 68 million m³ dam, a power station with two 19 MW turbines and a 145 km high voltage line to interconnect the island's distribution grids.

This will help to meet rising demand on the island (accounting for three-quarters of Fiji's population and most industrial/tourism activities) and enable substantial economies to be made by replacing oil imports.

The plant should be commissioned by the end of 1981 and it has been designed to permit future expansion of generating capacity by drawing on hydro potential in nearby catchment areas and installing two more 19 MW turbines.

The Fiji Government, the World Bank, the Australian government, through its bilateral aid programme, and the Commonwealth Development Corporation of the United Kingdom are also providing finance for the project, as well as the Asian Development Bank (for the high voltage line).

EUROPEAN PARLIAMENT

In reply to written questions by members of the European Parliament, the Commission gave the following information on questions concerning the EEC's development policy:

(1) On the basis of conversion rates adopted by the EIB 1 unit of account = Fiji dollars 1.06 = US dollars 1.24.

Development cooperation (question by Mr Willi Müller). The rules of the OECD's Development Assistance Committee, which centralizes all statistics in this area, expressly prohibit the inclusion of military aid in development cooperation expenditure. The Commission points out that the geographical breakdown of official EEC development aid is at present being discussed by the relevant Council authorities, as part of the work on harmonizing and coordinating member states' development policies, and on the basis of a recent Commission paper. The member of Parliament wished to know whether it was true that EEC countries tend to give preference to aids to their former colonies.

Contracts for EEC schemes in Asia (question by Lady Fisher of Rednal). The Commission concluded agreements in 1976 with the governments of the non-associated countries and international organizations covering a total of 20 million EUA (included in the Commission's 1976 budget), an important proportion of which went to technical assistance, irrigation, agricultural modernization and agricultural research projects in Asia. On 15 December 1977, 20 financing agreements were signed by the Commission and 10 developing countries and six regional organizations from Latin America and Asia: the 1977 budget provided for 45 million EUA for EEC assistance to the non-associated countries. The Commission pointed out that, when local expenditure is not covered, the implementation of the projects may be realized by contracts to supply materials, technical assistance or construction or irrigation programmes between the recipient states and firms of one of the EEC states or of the beneficiary states. Participation by firms from the EEC in contracts financed within the framework of the two aid programmes has been limited up to now, since these programmes have barely got under way. However, in two cases, European consulting firms have been in accordance with the selection procedures of the Asian Development Bank for studies included in the ADB's technical assistance programme which is partly financed by the EEC.

Ecosystem research in the Sahel region of the Sudan (question by Mr Willi Müller). The Commission has participated from the start in the work of the Club du Sahel, which is closely linked with the Permanent Inter-State Committee for Drought Control in the Sahel. It is paying close attention to development projects being undertaken with its support in the Sudano-Sahelian region, taking care to reject any action which might endanger the

natural ecological balance of this area. The Commission pointed out that the Liptako Gourma pilot project in Mali, which was not given priority at the Ottawa Conference among the 85 projects of the Ecology and Environment Group, will be the subject of research by the Sahel Institute, which was recently set up in Bamako. It should contribute towards the search for an ecosystem in the Sahel. The Commission's only knowledge of this scheme has been in the form of the document drawn up by UNESCO in Paris in November 1975, and it notes that the broad lines correspond to those of the Commission. However, the latter does not have funds to finance the research proposed, under its current programme of action on the environment.

Increase in EEC member states' development aid (question by Mr Osborn). The Commission gives details of the EEC member states' official development aid from 1961 to 1976: the statistics refer to net disbursements and not commitments and, therefore, do not reflect the substantial increase in specifically Community aid. This aid went up: in Belgium from 92.1 million dollars in 1961 to 340.1 in 1976 (in 1975 it was 377.7 dollars), in Denmark from 8.1 to 214.4 million, in the FRG from 366.1 to 1384 million (1668.8 in 1975), in France from 903 to 2145.5 million, in Italy from 59.6 to 226.3 million, in the Netherlands from 55.9 to 719.9 and in the United Kingdom from 456.8 to 834.8 million dollars. The EEC total went from 1941.6 to 5865 million dollars. Specifically Community aid went up from 17.3 million dollars in 1961 (only 3.6 million in 1960) to 501.1 in 1976 (but 721.7 in 1975). The Commission does not have information on each EEC state's military supplies to developing countries.

Investment conditions in Lomé Convention states (question by Mr Scott-Hopkins). The Commission referred to the booklets concerning the different points in which the member of Parliament is interested (freedom of establishment, double taxation agreements, repatriation of profits, local interest rates, etc.) which have been published, as well as a booklet on the investment codes of the 19 Yaoundé Convention states (the last edition appeared in 1974). In addition, the Commission has asked the delegates of the new ACP states to provide what information is available, but without much success. It hopes to be able to publish a series of booklets on all the ACP states during the second part of the Lomé Convention.

Financing of the Lomé Convention (question by Mr Ryan). For the financial years 1976, 1977 and 1978, the EEC states' contributions were fixed at a

| National contributions made or being made | | | | | |
|---|--------|------------|------------|------------|------------|
| ('000 EUA) | | | | | |
| States | % | 1976 | 1977 | 1978 | Total |
| Belgium | 6.25 | 11 312.50 | 16 875.00 | 17 375.00 | 45 562.50 |
| Denmark | 2.40 | 4 344.00 | 6 480.00 | 6 672.00 | 17 496.00 |
| Germany | 25.95 | 46 969.50 | 70 065.00 | 72 141.00 | 189 175.50 |
| France | 25.95 | 46 969.50 | 70 065.00 | 72 141.00 | 189 175.50 |
| Ireland | 0.60 | 1 086.00 | 1 620.00 | 1 668.00 | 4 374.00 |
| Italy | 12.00 | 21 720.00 | 32 400.00 | 33 360.00 | 87 480.00 |
| Luxembourg | 0.20 | 362.00 | 540.00 | 556.00 | 1 458.00 |
| Netherlands | 7.95 | 14 389.50 | 21 465.00 | 22 101.00 | 57 955.50 |
| United Kingdom | 18.70 | 33 847.00 | 50 490.00 | 51 986.00 | 136 323.00 |
| Total | 100.00 | 181 000.00 | 270 000.00 | 278 000.00 | 729 000.00 |

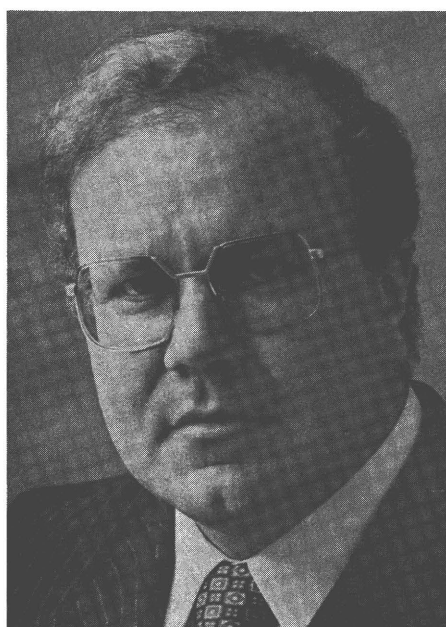
total of 729 million EUA: 181 in 1976, 270 in 1977 and 278 in 1978, of which about 25.95% for the FRG and France respectively, 18.70% for the United Kingdom, 12% for Italy, 7.95% for the Netherlands, 6.25% for Belgium, 2.40% for Denmark, 0.60% for Ireland and 0.20% for Luxembourg. This amount of 729 MEUA is equivalent to about 23% of the total provided for the Lomé Convention as a whole. For 1979, the Commission has estimated that the contribution could be 400 m EUA, but it does not have any valid assessments for 1980. (see Table).

Financial control. In a report laid before the European Parliament at its session at the beginning of July, Martin Bangemann (German liberal, FDP) dealt with the question of control by the Parliament of the financial operations of the EDF.

In stressing the need for parliamentary control, Mr Bangemann emphasized that in future EDF financings should not be an *ad hoc* procedure but form part of the annual budget of the EEC.

Mr Tugendhat, the European commissioner in charge of the budget, while agreeing on the need for parliamentary control, pointed out that the EEC member states had not provided for the 4th EDF to be part of the budget when it was set up.

The use of Stabex transfers: In reply to a written question by Mr Petersen (Danish Communist) on the use made of Stabex transfers by the ACP states, the Commission said it was satisfied with the way in which they had been used. It believed that in general such funds had been used wisely, and pointed out that under the Lomé Convention there is no provision for control of the funds transferred, the ACP states being required simply to "inform" the Commission of what use had been made of them. □



Martin Bangemann

FAIRS AND EXHIBITIONS

Dakar International Fair

In early December, during the third International Fair in Dakar, Senegal, an investors' forum will be held with the support of the European Commission and UNIDO. Its objective is to publicize industrial cooperation opportunities such as co-investments, technical agreements and marketing between European industrialists and both the English- and French-speaking countries of West Africa. The geographical scope has been widened since the second fair in 1976 to include 16 West African countries instead of six. From the African side, participation will come from both the public and financial organizations. The European participants will be mainly from industrial

concerns, but there will also be representatives from a number of regional and international organizations: UNIDO, the EEC, the World Bank, the African Development Bank, the CEAO, ECOWAS and the Mano River Union.

The five days of the forum, from 4-8 December, will promote bilateral contacts between African promoters and European industrialists concentrating on medium-sized projects. The forum will provide translation in English, French and German, and will include visits to local firms and the Dakar free zone. The organizers will also help with hotel accommodation and flights. Anyone interested should contact the UNIDO Office, Ave de Tervurenlaan, 128 (Box 5) B 1040 Brussels, Belgium.

Brussels fair

Only three months ago the 2nd "Forum des Nations" ended in Brussels, but already the organizers are talking of little else but the 3rd forum which will be held in the Brussels exhibition park from 28 April to 13 May 1979. Information on the next fair can be obtained from: Foire Internationale de Bruxelles, Parc des expositions, B 1020, Brussels, Belgium, Tel (02) 4784860 — Telex 23643. □

SOLOMON ISLANDS

The EEC Council has already given its agreement to the draft decision of the ACP-EEC Council of Ministers on the accession of the Solomon Islands to the Lomé Convention. The islands became the 37th independent member of the Commonwealth on 7 July. The Solomons will become the 54th ACP state, but until all the procedures are completed it will benefit from the provisions applied to overseas countries and territories.

The Solomon Islands stretch for 900 miles between Papua-New Guinea and Fiji and have a land area of approximately 30000 km² (the size of Belgium). The population of some 200000 live mainly in the highlands of the main islands. The capital, Honiara, (pop. 15000) is on the largest island, Guadalcanal.

The new country is a constitutional monarchy, with Elizabeth II as head of state. Her representative in Honiara is the Governor-General, Baddeley Devesi, a Solomon islander. The Prime Minister, Peter Kenilorea, was a teacher and district commissioner before his election to the Solomon legislative assembly in 1976. □

ACP EMBASSIES

Three new ACP ambassadors, from Malawi, Nigeria and Rwanda, have presented their credentials to the presidents of the EEC Council and the Commission.

Malawi

Nelson Thompson Mizere (38) has just taken over from Timon Mangwazu as Malawi's ambassador to the EEC. Mr Mizere holds a diploma from the Blantyre institute of public administration and an arts degree from the University of New Delhi.

After a spell in administration, mainly as deputy commissioner for Blantyre district, he embarked on a diplomatic career. Between 1971 and 1974 he was first adviser and head of chancellery at Malawi's embassy in Pretoria, where, after a short period back home, he returned as ambassador, a post he occupied until 1977.

Mr Mizere is married with three children.

Nigeria

Peter Ayodele Afolabi, the new Nigerian ambassador, studied economics and law at the universities of Durham and Leeds in the UK. His career began in 1956 in the administrative services of eastern Nigeria. In 1961, he was made first secretary of the foreign ministry, where he stayed for almost a year until he was posted abroad to become chargé d'affaires at the embassy in Ethiopia and then first secretary in the embassy in Guinea. He returned to Lagos in 1966 and was appointed adviser at the foreign ministry. But he did not stay in Nigeria. He became embassy adviser in Japan and then his country's consul general in New York (1967-1968). From 1970 to 1973 he represented his country in Guinea, before becoming high commissioner to Canada and then head of the economic department at the foreign ministry in 1976. Mr Afolabi, an accomplished linguist with a command of Yoruba, French, German and Spanish, is married with three children. His hobbies are golf, tennis and cross-country skiing.

Rwanda

The new Rwandese ambassador to the EEC, Callixte Hatungimana (47),



began a career in education in Rwanda after obtaining a teaching diploma in science and geography in Belgium. He returned to university, this time in France, first Lyons and then Paris, obtaining a master's degree in education in 1970 and a diploma in development studies in 1971. In 1973, he was appointed head of the presidential offices, in charges of social, educational and cultural affairs. From 1973 to 1976 he was Rwanda's ambassador to Burundi and then became vice-rector of the national university of Rwanda.

Mr Hatungimana is married with two children. □

RWANDA

Klaus Meyer's visit

At the government's invitation, Klaus Meyer, Director-General for Development in the Commission of the European Communities, paid an official visit to Rwanda in mid-July.

During his visit Mr Meyer had talks with the planning minister, Mr Nduhugirehe, and the public works minister, Mr Gatabazi, on the state of Rwanda-EEC cooperation and the prospects for a new ACP-EEC convention.

Mr Meyer visited the various projects in Rwanda financed by the EDF—tea plantations, a tea factory at Mulindi, the Kigali power station, and the Kigali girls high school—and was also received by President Habyarimana.



From top to bottom ambassadors Mizere (Malawi), Hatungimana (Rwanda) and Afolabi (Nigeria) presenting their credentials to Commission president Roy Jenkins



President Habyarimana, Mr Meyer and the Commission's delegate on the road works

He also attended the opening ceremony for work on the extension of the Kigali-Butare road to Kayanza in Burundi, in the presence of the Rwandan head of state Major-General Juvenal Habyarimana.

This road, which is 172 km long, all but 19 km in Rwanda itself, is being financed by the 4th EDF, 23 million EUA coming from the national programme and 11 million EUA from the regional fund. □

SUGAR

The EEC will be paying 27.81 EUA per 100 kg of raw sugar and 34.49 per 100 kg of white sugar imported from the ACP countries between 1 July 1978 and 30 June 1979. This is a 2% increase, exactly what the Community producers are getting. The Community used this argument to oppose the ACP sugar producers' request for a much more substantial (29.71 EUA per 100 kg raw sugar) increase which would take the rise in transport costs into account.

Differences of opinion between the two delegations halted the negotiations on 25 May after only two days, but they started up again a month later and were subsequently concluded.

The ACP countries ultimately accepted the Commission's 2% offer when it became clear that the EEC would go no higher. Neither did they get application of the new price brought forward, a proposal of particular interest to the Caribbean contingent who begin marketing in February and who will therefore only start benefiting from the price increase next year. □

EDF (continued)

The 128th and 129th meetings of the EDF Committee (1)

New financing decisions under the 4th EDF

Following the favourable opinion given by the EDF Committee, the Commission also took the following financing decisions:

| EUA | |
|--|-----------|
| Lesotho | |
| Rural water projects | 700 000 |
| OCAM | |
| Regional cooperation: the African and Maurician institute of statistics and applied economics | 900 000 |
| Ethiopia | |
| Exceptional aid | 2 750 000 |
| Guinea-Bissau | |
| Construction and equipping of two schools at Farim and Catio | 1 000 000 |
| Seychelles | |
| Public services projects, site development and financing mortgage loans | 1 480 000 |
| Guinea-Conakry | |
| Equipment and technical assistance for agricultural faculties | 850 000 |
| Fiji | |
| The Vanua Levu road | 2 850 000 |
| Tonga | |
| Purchase of road equipment | 1 430 000 |
| Zaire | |
| Retraining of technical and teaching staff at the Zaire national institute of professional training (INPP) | 770 000 |
| Madagascar | |
| Training of cadres and organizers for decentralized collectives | 1 150 000 |
| Surinam | |
| Multi-annual training projects | 1 500 000 |
| Cameroon | |
| Djuttitsa tea project | 2 840 000 |
| Kenya | |
| Improving health facilities in Machakos | 2 300 000 |
| Botswana | |
| Aid to assist the decentralization of rural development | 1 810 000 |

| | |
|---|------------|
| Madagascar | |
| Health facilities | 2 590 000 |
| Chad | |
| Re-equipment of Moundou and Bongor high schools | 1 090 000 |
| Fiji | |
| "Native Land Development" project | 900 000 |
| Botswana | |
| Exceptional aid | 1 600 000 |
| Chad | |
| Development of stock-raising | 3 200 000 |
| Comoros | |
| Promotion of small-scale stockraising | 300 000 |
| Cameroon | |
| Development of north-west Benoue | 4 203 000 |
| Burundi | |
| Completion of the project extending tea production and the Ijenda tea factory | 7 277 000 |
| Benin | |
| Atakora project | 2 858 000 |
| All ACP and OCT | |
| Global authorization of accelerated financing procedures for the multi-annual programme of micro-projects | 5 000 000 |
| Kenya | |
| Integrated development project for the Machakos district | 17 700 000 |
| Cameroon | |
| Realignment of the stretch of railway Douala-Edea | 10 000 000 |
| Western Samoa | |
| Hydro-electric works at Magiagi | 2 353 000 |
| Fiji, Tonga and Western Samoa | |
| Regional telecommunications network | 4 300 000 |
| São Tome and Principe | |
| Supply of materials | 300 000 |
| Seychelles | |
| Meteorological station | 150 000 |
| Caribbean (Antigua) | |
| Water supplies in the northern region | 430 000 |
| Caribbean (regional project) | |
| Tourist study | 200 000 |
| Sierra Leone | |
| Creation of a section in the Mano River Union secretariat to deal with industrial projects | 900 000 |
| New decision on the resources of the 3rd EDF | |
| Zaire | |
| Penetungu-Lubutu road | 14 000 000 |

(1) Details will be published in the next issue of the *Courier*.

GENERAL INFORMATION

15th OAU summit in Khartoum

The opening of the 15th OAU summit in the Sudanese capital on 19-22 July 1978, was attended by 30 heads of state and government. It was the biggest turn-out since the OAU was set up in 1963. Why? Perhaps because of the agenda, the main items of which dealt with the Western Sahara, foreign intervention in Africa and the projected creation of an African security force. The most important of the 250 resolutions adopted concern these issues and the new president in office of the OAU, General Nimeiri, must now see that they are applied. The Khartoum summit also elected a replacement for William Eteki Mboumoua, who had nearly completed his term as secretary-general and did not, for personal reasons, wish to stand for re-election. The new official, the OAU's fourth secretary-general, is Edem Kodjo, Togo's foreign minister.

At the inaugural session, UN secretary-general Kurt Waldheim drew attention to the fact that *per capita* food production in Africa had dropped and more than 83 million people were now getting below what was considered to



President Gaafar el Nimeiri

be the basic minimum food requirement. He also spoke out against the arms race which, he said, costs almost \$400 million every year.

OAU heads of state and government meet in Khartoum: resolution on cooperation with the EEC

1 — Expressing their satisfaction with the model framework for cooperation constituted by the ACP-EEC Lomé Convention, negotiated on the basis of the eight principles contained in the African Declaration on Cooperation, Development and Economic Independence, and signed on 28 February 1975;

2 — Expressing their desire to see ACP-EEC and intra-ACP cooperation consolidated, extended and deepened on a basis of the equality and sovereignty of all states, of mutual and equitable advantages and of non-interference in the domestic affairs of the countries concerned;

3 — Adopt the relevant observations contained in the ACP memorandum on the state of application of the EEC-ACP Lomé Convention and unhesitatingly call for the inadequacies of this Convention to be remedied, in the light of experience acquired during its application in the framework of the renegotiation;

4 — To this end, give their representatives a mandate to renegotiate the ACP-EEC Lomé Convention, in conformity with the memorandum adopted by the ACP Council of Ministers at its 15th session and taking account of the relevant texts, which follow. □



Plenary session of the 15th OAU summit in Friendship Hall, Khartoum

CLUB OF ROME

The Club of Rome (see *Courier* no. 41) celebrated its 10th anniversary on 13 July at an academic session attended by Italian premier Andreotti and senate president Fanfani. The Club, which has 100 members, including businessmen, scientists and top civil servants from many countries, is a private association for the study of world problems. More than 70 members were at the meeting in Rome to discuss the problems and prospects of modern society and lay down guidelines for the Club's future work and study.

Since Aurelio Peccei started the Club of Rome in 1968 it has attracted attention by bringing out various studies on the possible development of our planet. Its main models, which are original and often controversial, are outlined in its publications *The Limits to Growth*, by Dennis Meadows in 1972; a more elaborate model, *Strategy for Tomorrow*, produced with the aid of computers by Mihaljo Mesarovic and Eduard Pestel in 1974; and the *RIO Report*, (Reshaping the International Order), by Nobel prizewinner Jan Tinbergen in 1976.

In his speech, Mr Peccei stressed that the world situation was deteriorating constantly. As he sees it, "mankind is at a crossroads". There is overpopulation (4 400 million people in the world since 9 July 1978), more than 300 million unemployed, an ever-widening North/South gap, nationalism on the part of 150 sovereign states, constant militarization, the destruction of the environment (20 ha forest destroyed every minute) and so on. There are so many problems and they must all be solved fast. The Club of Rome's view is that man himself holds the key, the principal resource which can preserve a viable world—"the vast potential of his brainpower". □

THIRD WORLD DEBTS

The British government has joined Canada, the Netherlands, Sweden and Switzerland, among the developed world, in cancelling the debts of a number of developing countries to which it had made loans. Mrs Hart, the British development minister, announced the decision in the house of commons on 31 July. The amount involved is some £900 million (approx. 1 400 m EUA). In all, 17 countries have had their debts

cancelled: Afghanistan, Bangladesh, Botswana, Egypt, Gambia, India, Indonesia, Kenya, Lesotho, Malawi, Nepal, Pakistan, Sierra Leone, Sri Lanka, Sudan, Tanzania and Western Samoa.

In response to the growing concern about human rights among parliamentarians the government's scheme does not apply to Kampuchea (Cambodia), South Yemen and Uganda. The main beneficiary of the scheme will be India where some £576 million (870 million EUA) of debt will be written off.

In the house of commons, Mr Hart explained that the policy was consistent with the present policies of giving grants rather than loans. Part of the grants paid to developing countries today she said, went not into new projects but to paying debts incurred in the past. □

UNCTAD

No results in copper talks

On 25 July after a week of work, 52 copper producing and consuming countries adjourned, their fourth preparatory meeting, which took place in the UNCTAD framework, without any result. The participants have not even fixed a date for a new meeting. It was expected that this session would lead to progress towards the setting up a "body" grouping copper producing and consuming countries (the plan was notably supported by the EEC, the United States, Canada and Australia). However, the Peruvian delegation, supported by 17 developing countries (but not by important producers such as Chile and Zambia) presented a new text proposing the setting up of a special committee in UNCTAD. This proposal created a new situation, and the participants, who had succeeded in making important progress during earlier meetings, left without reaching an agreement. □

CEAO

The *ad hoc* agricultural research committee of the West African Economic Community (CEAO), in cooperation with the Senegalese government, met at the beginning of July at the national agricultural research centre (CNRA) in Bambey, Senegal.

The committee, which is studying the question of agricultural research in the CEAO countries, concentrated on the role of research scientists. Since agriculture is the main economic activity of the area, and since agricultural research is an important factor in the economic and social development of the CEAO countries, the committee pointed out the central role of the research scientists and the fact that their activities are little known. It believed this situation could be improved if the CEAO proclaimed an "African research scientist year". □

ABEDIA/FAO

An agreement was signed in Khartoum in July between the Food and Agriculture Organization of the United Nations (FAO) and the Arab Bank for Economic Development in Africa (ABEDIA) on two agricultural aid programmes, the first an immediate emergency aid programme and the second fixing a long-term programme of investment.

The emergency aid programme was signed by Dr Chedly Ayari, the chairman of ABEDIA, and by Dr Edouard Saouma, director-general of the FAO. Under this agreement the Bank's \$15 million of emergency aid, which is destined for countries hit by drought and other natural disaster, in particular at present the threat of desert locusts, will be coordinated and managed by the FAO. The programme includes the financing of projects in African countries and help for three regional organizations involved in the anti-locust campaign. The countries are Cape Verde, Chad, Ethiopia, Gambia, Guinea-Bissau, Guinea-Conakry, Mali, Madagascar, Senegal, Niger and Upper Volta. The three organizations concerned are the Organisation Commune de Lutte Anti-Acridienne et de Lutte Anti-Aviaire (OCLALAV), the Organisation Internationale pour le Controle du Criquet Migrateur Africain (OICMA) and the the Desert Locust Control Organization for Eastern Africa (DLCOEA). □

TECHNOLOGY

The transfer of technology

The intergovernmental group of experts set up under resolution 89(IV) of UNCTAD to prepare a draft code of

conduct for the transfer of technology held its sixth and last meeting in Geneva at the beginning of July. At the end of the meeting the experts were able to present only a partial draft code because of differences in the way various groups of countries looked at certain key questions. The problem of overcoming these differences of opinion will be left to the UN conference called by the 32nd general assembly, before it can get on with its main function of negotiating a code and taking the measures necessary for its adoption. The conference will be held under the auspices of UNCTAD in Geneva from 16 October to 10 November 1978. The European Commission will shortly provide the Council with a proposition to ensure coordination between the EEC countries prior to the conference.

Technology and experience

One of the various forms of cooperation which the industrialized countries offer the developing world is taking on a new dimension in the EEC, with the setting up of the *Echanges et Consultations Techniques Internationaux* association. This involves technicians, top civil servants, heads of firms and others at the end of their career offering their experience and their time, on an entirely neutral basis, to help their opposite numbers in the developing countries.

The principle of this kind of cooperation, whether offered by ECTI or other, similar organizations, is that it is voluntary.

An expert who agrees to answer a request does so quite freely, since he has the relevant experience, is anxious to pass it on and wants to go on being useful. He asks for no payment, but can help with schemes of the highest international standards, in return for his expenses.

The aims and purposes and the means of action of ECTI are very similar to those of comparable bodies elsewhere, the best known of which are IESC (US), CESO (Canada) and BESO (UK). The arrival on this "market" of a contingent of French-speaking experts, more than 60% of them with a command of one or more foreign languages, is likely to raise greater interest in many ACP countries.

Over and above his fund of experience, the ECTI expert has the advantage of being available and both structurally and financially independent. He does not need to make a profit, he can go to the places in question, right to the site of the problem, and spend as much time as is necessary transferring

his experience to his opposite number. He has no duty to any employer, the recipient does not pay him and so he can express his opinions with complete impartiality.

ECTI, 23, rue de la Sourdière, 75001 Paris, France. - Tel. 261 1880/261 0379. Telex: 620 804 F (please specify ECTI).

□

FOOD AID

Somalia

The EEC Council has agreed on food aid for Somalia in the form of 13 500 tonnes of cereals and 500 tonnes of butteroil to feed the nomadic population being resettled in the south of the country.

The aid will be provided at the port of unloading, and at current world prices the cost of the operation is estimated at 2 432 000 EUA.

Laos

The Commission has agreed on emergency food aid for displaced persons in Laos to be channelled through the UNHCR. This operation, which involves 2 500 tonnes of cereals and 450 tonnes of butteroil, to be delivered to its destination, is worth roughly 1 217 000 EUA.

Thailand

The Commission has also agreed on emergency food aid, again through the UNHCR, for refugees from Indochina in Thailand. The 300 tonnes of butteroil will be delivered at the port of unloading at a cost of some 370 000 EUA. □

EXCEPTIONAL AID

With clearance from the EDF Committee, the Commission agreed on 14 July 1978 to grant exceptional aid of 1.6 m EUA for a campaign against foot-and-mouth disease in Botswana.

The aid will help finance local research and the preparation of vaccines to wipe out the disease. □

BANGLADESH

EEC-Bangladesh jute agreement

An agreement between the People's Republic of Bangladesh and the European Economic Community on trade in jute products was signed in Brussels on 11 July. Jute minister Shafiqul Azam, signed for Bangladesh and Mr Tugendhat for the Community.

The agreement, which has been in force *de facto* since 1976, runs until 31 December 1979, and gives Bangladesh the benefit of generalized tariff preferences for its exports of jute products to the Community. It also provides for voluntary restraint by Bangladesh on exports of certain jute products to the Community market, to take account of the largely regional problems besetting the Community jute industry.

The limits agreed are significantly higher than those set under the similar agreement previously in force. The new agreement also includes a substantial section dealing with cooperation between the parties to promote the consumption of jute products, which are faced with competition from synthetic substitutes; a joint committee on cooperation has been set up, among other things to foster contacts between representatives of trade, industry and research from the two sides.

The new agreement takes particular account of the fundamental importance of jute, and the export of jute products, for the economy of Bangladesh. □

COCOA

The International Cocoa Council held its 11th meeting in London at the end of July and underlined the importance of renegotiating without delay the 1975 International Cocoa Agreement. It is the producing countries who are calling for the renegotiation, which would be held at UNCTAD in Geneva. They claim there is a threat of an "unacceptable" fall in prices, despite two years of prices rises due to production shortfalls, because production will be excessive over the next few seasons and less cocoa was processed this year.

The consuming countries seem to be hesitating between a limited extension of the present agreement and the renegotiation of some of its clauses. □

EUROPEAN COMMUNITY

European Council in Bremen agrees on monetary zone

The heads of state and government of the nine EEC countries agreed at their summit meeting in July on an outline for a stable monetary zone in Europe. The final decision will be taken at the next European Council in December, after further study by finance ministers, central banks and other experts. The new monetary set-up is planned to come into effect at the beginning of next year. The scheme involves the creation of a European monetary fund and a new "snake" maintaining the exchange rates of the European currencies within certain margins. Exchanges between central banks would also be in a European currency unit (often called an ecu) based on a basket of European currencies. Although not all the EEC member states took exactly the same position on the relaunching of the idea of economic and monetary union, the European press generally regard the summit as a major step forward. Roy Jenkins, the president of the EEC Commis-

sion, who restarted the debate on monetary union last year, welcomed the Bremen decision in the following declaration at a joint press conference with the German chancellor, Helmut Schmidt, in Bremen:

"This European Council was much the most significant and worth-while of the five I have attended. My fears that Bremen might be a mere dress rehearsal for Bonn proved unfounded. The test was bound to be advance on monetary policy, but the question of concerted growth was also of crucial importance. Vice-president Ortoli's work has laid the foundation for a programme of concerted action, which showed that we can advance better together than alone. The central subject, however, was the monetary question, and I feel great satisfaction at the amount of progress made. When I relaunched the idea of monetary union at Florence in October last year I had no idea we should have got as far as we did at Copenhagen; at Copenhagen I doubted that we should be able to move as far and as concretely as we have done here in Bremen.

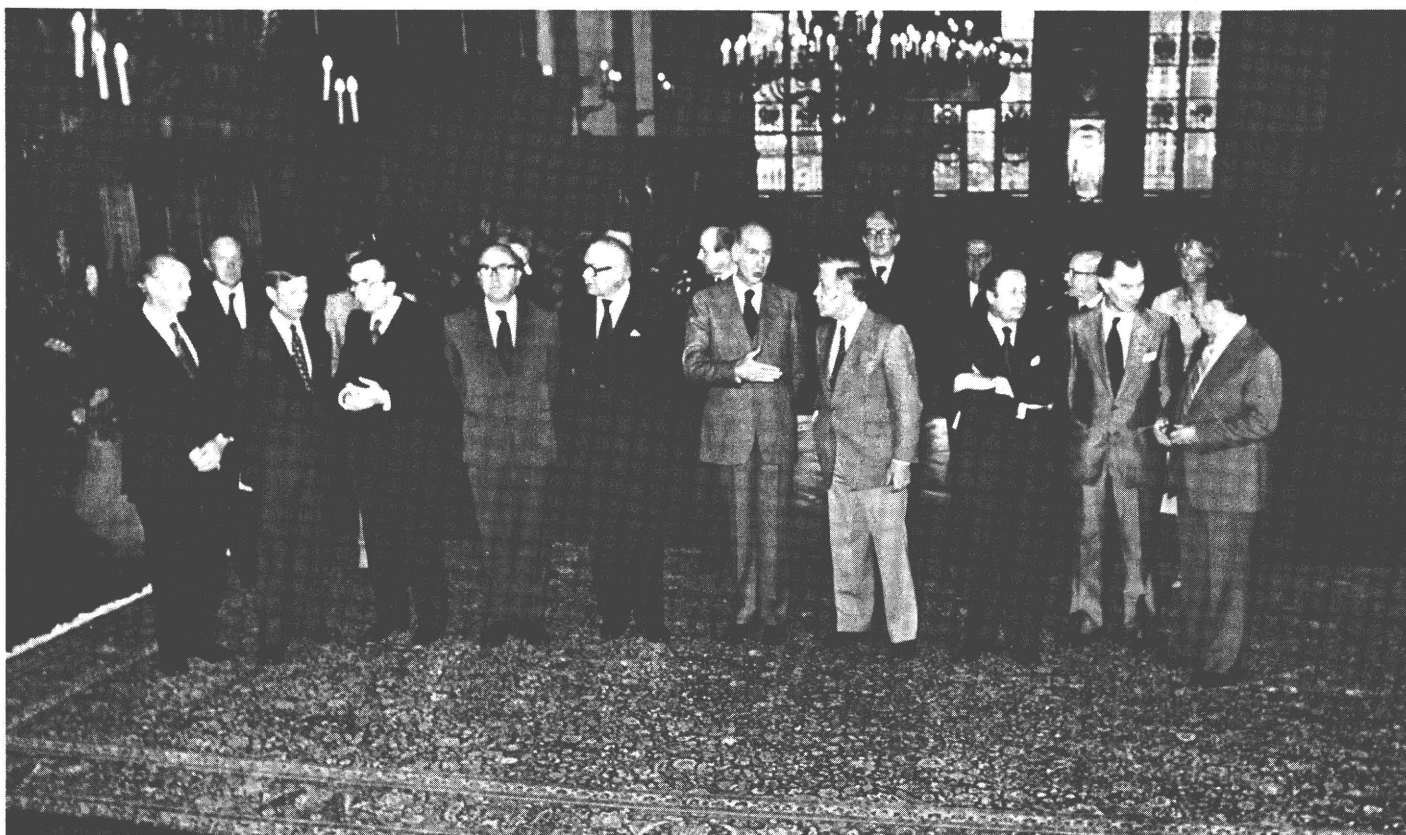
"We have taken no decision or entered into any commitment yet, but we have put forward the clear lines of a major, imaginative but at the same time realistic scheme for the creation of a zone of monetary stability, which would be backed by a fund of a very substantial scale. The total, some 44 billion EUA, would be in excess of the IMF and on a scale far greater than any other European scheme ever discussed. A very short time-scale is involved: by 31 October we should study and fill in the detailed rules of a firm scheme...

"This has been not merely a good but an outstanding European Council, which has opened up a further clear prospect for a major advance. I should like to mention briefly three other areas where we have made progress:

— Energy policy, where we have adopted clear and coherent objectives for 1985, putting us in a stronger position for the discussions at Bonn;

— Youth unemployment: we agreed to overcome some recent problems in the Commission's proposals, to enable the measures to come into force on 1 January 1978;

— Mediterranean agriculture: we agreed to take the remaining decisions by the end of September, in order to seek to right the existing imbalance in the Community."



The Bremen summit. From left to right Mr Lynch (Ireland) Mr Van Agt (Netherlands) Mr Andreotti (Italy) Mr Jenkins (president of the European Commission) Mr Callaghan (United Kingdom) Mr Giscard d'Estaing (France) Mr Schmidt (Germany), Mr Thorn (Luxembourg) Mr Tindemans (Belgium) and Mr Jørgensen (Denmark)

Bonn economic summit

Two weeks after the European Council meeting in Bremen, the major industrial powers among the OECD countries met in Bonn. The heads of state or government of Britain, Canada, France, Germany, Italy, Japan and the United States⁽¹⁾ held two days of discussion on economic growth, inflation, employment, monetary policy, trade, energy and other issues of particular interest to the developing countries.

The final declaration on 17 July covered all these areas, promising action to improve growth without stimulating inflation, lessen extreme balance of payments deficits and surpluses, stabilize currencies, improve the flow of investment, and so on. A section of the declaration also dealt with relations with the developing countries.

"Success in our efforts to strengthen our countries' economies will benefit the developing countries, and their economic progress will benefit us. This calls for joint action on the basis of shared responsibility.

In the years ahead the developing countries, particularly those most in need, can count on us for an increased flow of financial assistance and other resources for their development. The Prime Minister of Japan has stated that he will strive to double Japan's official development assistance in three years. We deeply regret the failure of the COMECON countries to take their due share in the financial assistance to developing countries and invite them once more to do so.

The poorer developing countries require increased concessional aid. We support the soft loan funds of the World Bank and the three regional development banks. We pledge our governments to support replenishment of the International Development Association on a scale that would permit its lending to rise annually in real terms.

As regards the more advanced developing countries, we renew our pledge to support replenishment of the multilateral development banks' resources, on the scale needed to meet the growing needs for loans on commercial terms. We will encourage governmental and private co-financing of development projects with these banks.

The cooperation of the developing countries in creating a good investment climate and adequate protection for foreign investment is required if foreign private investment is to play its effective role in generating economic

growth and in stimulating the transfer of technology. We also refer to our efforts with respect to developing countries in the field of energy.

We agreed to pursue actively the negotiations on a Common Fund to a successful conclusion and to continue our efforts to conclude individual commodity agreements and complete studies of various ways of stabilising export earnings."

EUROPEAN OPINION

The latest Euro-barometer opinion poll in the nine EEC countries has concentrated on attitudes to the first all-European parliamentary elections to be held in June next year. The poll does not reveal great enthusiasm for voting, although support for the idea of the elections is still widespread. Support for the principle of the elections is highest in Luxembourg (82%), the Netherlands (80%) and Italy (77%), and lowest in Britain (65%) and Denmark (54%), although it must be remembered that the figures in 1973 for these last countries were respectively only 33% and 36% in favour. The number against the elections ranges from 7% in Luxembourg to 24% in Denmark and the average for the EEC as a whole is 71% in favour, 11% against.

Only half "certain" to vote

Intention to vote: the poll showed a bare majority of Europeans (51%) "certain" to vote, and 26% who will "probably" vote. Those certain to vote were highest in the Netherlands (69%) and France (60%) and lowest in Belgium (36%) and Denmark (34%). However, in no country did those saying they would certainly or probably vote drop below 60%; and this figure, in Belgium, was in one of the only two countries in the EEC where voting is obligatory. When questioned as to whether participating in the first Europe-wide elections would make them feel more like European citizens, 46% said yes, 34% no and 20% did not know. And as far as the importance of the elections for European unity was concerned, 48% thought they would be of great importance, 30% of little importance, and 22% gave no reply. □

POLITICAL PARTIES

With direct elections to the European Parliament drawing near, the main political

groupings are preparing their positions on a number of issues affecting Europe as a whole. During a recent study forum organized by the European People's Party (Christian Democrats) a report by Maurice Dewulf, a member of the EPP group in the European Parliament, considered the North-South dialogue and relations with developing countries in general. After a debate a resolution was adopted calling for a change in mentality. Mr Dewulf explained what was meant by this to the group:

"We must not only accept the participation of the developing countries and the international dimension of the discussions but above all the concept of interdependence, that is, the reciprocal dependence between the developing countries and the industrialized nations and, in the last analysis, the reciprocity of their interests.

We must recognize that the Third World is the most efficient "locomotive" for renewed growth: world trade with the developing countries is constantly growing to such an extent that they have become the Community's most dynamic trading partners; substantial aid to stimulate growth in the developing countries would be just as decisive for growth in general; it is therefore essential that the Community encourages the implementation of a special development programme for the Third World by means of a substantial transfer of financial resources. This programme would include government aid for infrastructure projects and private capital used to stimulate productive investment."

In the resolution the Christian-Democratic Group considered firstly that the international crisis and the problems arising therefrom "must not result in opposition to progress but rather in the pursuit of a more ambitious policy and the adoption of a more positive position in international fora."

Finally, the Christian-Democratic Group recommended that an effort be made over the next few years to introduce joint management at world level to facilitate an approach to the three areas which are crucial for the future of mankind and international cooperation:

- (1) agriculture and food, where the situation is deteriorating;
- (2) energy and raw materials;
- (3) the integration of the developing countries into the new international division of labour and, by extension, the need for the industrialized nations to make structural changes."

Mr Lorenzo Natali, Vice-President of the Commission of the European Communities, emphasized in his report on the new Lomé Convention the need to harmonize development cooperation

(1) The EEC as such was represented by the presidents of the Council and the Commission, taking part in discussions particularly relevant to the Community.

policies to a greater extent in the Community framework and stressed the Community's novel role in peaceful mediation to assist the development of the newly-emergent African nations.

The Commissioner called for a "new conception of African problems which should lead us to satisfy the legitimate aspirations of these countries and give back Africa to the Africans." Mr Natali concluded that "to make this qualitative leap required a determination to create a genuine spirit of Euro-African cooperation. This spirit of cooperation should be seen as a basic refusal to subordinate the rights of the individual to economic interests and as an aid to structural development not in terms of domination but of participation."

New declaration by the socialists

The leaders of European Community socialist parties have adopted a 31-point political declaration, where among other things it is stated that "the greater rapprochement in Europe is compatible with respect for our individualities." In addition the socialist parties undertake to work towards an economic policy aimed at: full employment; price stability; fairer distribution of incomes and wealth; efficient and democratic economic structure; democratization of economic life; extension of social protection; improvement in living and working conditions; and enlargement of training and education possibilities. The socialists welcome the restoration of democracy in Spain, Greece and Portugal and firmly support these countries' accession to the Community. The socialist parties are in favour of a policy of detente and cooperation with East European countries, as formulated in the Helsinki Act. They call for increasing cooperation with developing countries. It was Mr Robert Pontillon, president of the Union of European Community socialist parties, who presented the text of the resolution, and the common emblem. □

SEMINARS

The European Law Forum

Important Seminars to be presented on the European Development Fund and protection of European industries.

EEC Commission staff lawyers and other experts will be presenting, in conjunction with the European Law Forum, two one-day seminars on November 14 & 15, 1978, in Brussels at the Hilton Hotel.

The topic of the November 14 programme is the European Development Fund — a guide to contracting — which will focus largely on the procedures of contract-getting under the development funds and Lomé Convention. With the assistance of Jacques Buchet de Neuilly and Michael P. Lake, lawyers in the directorate general for development, an in-depth analysis of the subject area will be made to give participants a thorough understanding of Commission rules and procedures for tendering for and obtaining EDF-funded contracts. Among the specific items to be addressed are: an introduction to the EDF; project appraisal and approval; the general conditions for work, supply and services contracts; practical aspects of contracting; dispute resolution; competition law considerations.

While designed to provide a practical working knowledge of Commission procedures relating to EDF-funded contracts to potential contractors, lawyers and other professional advisors, this programme will also serve as a useful and comprehensive examination of the subject for industry and government representatives as well.

On November 15, Alastair Sutton, a lawyer in the directorate general for external affairs, and other staff members of the Commission, will present a one-day seminar examining the operation and scope of Community rules applicable to the protection of European industry threatened by imports. This programme will include reference to safeguard actions, anti-dumping and countervailing duties, procedural aspects of recourse to the Commission, regional protection and international negotiations on safeguards. Those involved with trade with the Community and its member states, whether as importers, exporters, producers, consumers, employers, or those called upon to advise these groups, will benefit from the review of the legal framework for commercial defense of European industry which this seminar will afford.

In the case of both seminars, basic documentation will be made available to the participants to assure a thorough understanding of the subject matter. Participation may be for either one or both of these seminars; further information and registration may be obtained by directly contacting the European Law Forum, 398, Avenue Louise, Louizalaan 398, B 1050, Brussels, Belgium; Tel. (02) 6470548; Telex 26814 Paibel B.

The European Law Forum is an organization formed to provide European jurists and industry with skill-orientated programmes on a broad range of topics of international legal significance. □

ECONOMIC AND SOCIAL COMMITTEE

During its 161st plenary session in mid-July 1978, the Economic and Social Committee of the EEC adopted with only six abstentions an opinion on the working of the Lomé Convention and the discussions on a new convention. The committee's view considered the first years of operation of the present convention, and was timed to coincide with the opening of new negotiations between the EEC and the ACP countries. The committee's opinion was based on a report prepared by Mr Carstens (Denmark, employer's group) and Mr Soulat (France, trade union side) as part of the foreign affairs section of the committee's work. As to the future, since the present convention will come to an end in 1981, the committee said it was in favour of consolidation of existing policy. It believed that the Lomé Convention could and should provide an important contribution to the search for a new international economic order which would allow the developing countries to achieve economic sovereignty. □

OECD

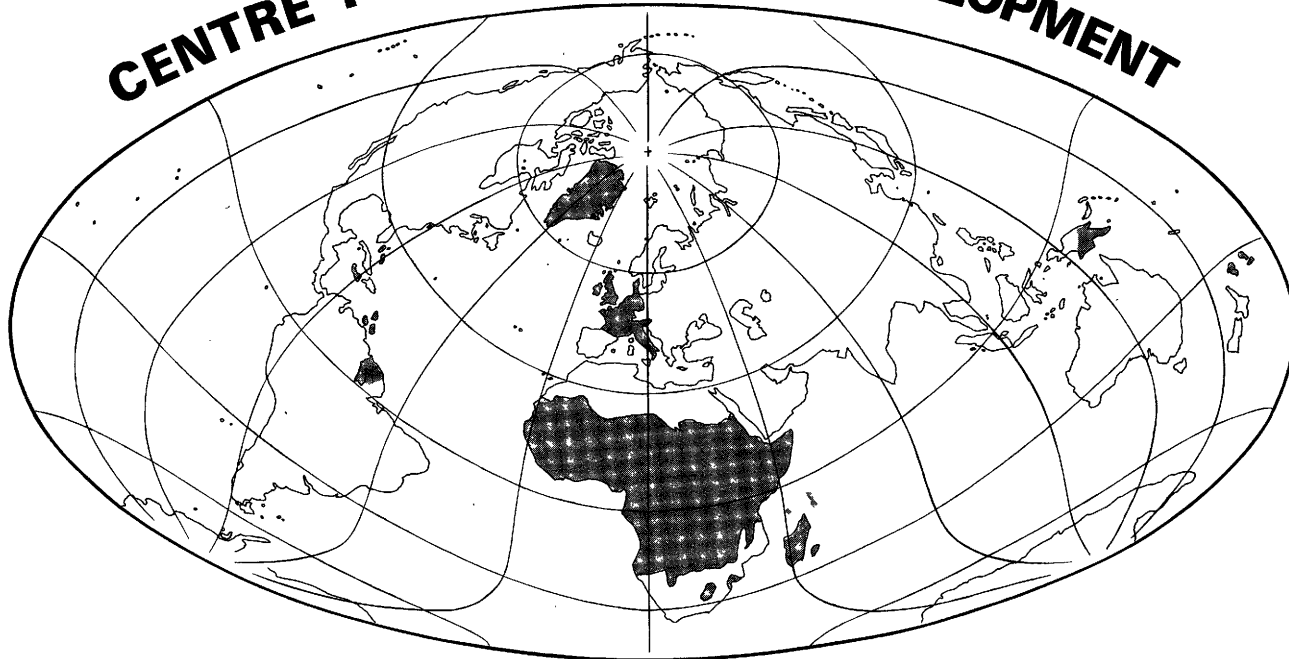
Development assistance falls

The official development aid (ODA) of the 17 members of OECD continued to fall in 1977 in terms of their GNP. It represented 0.31% of GNP against 0.33% in 1976 and 0.35% in 1975. This disappointing outcome was the result largely of a fall in American and German aid and stagnation in that of Japan.

Official Development Aid (as % of GNP)

| | 1970 | 1976 | 1977 | |
|----------------|------|------|------|----------|
| | (%) | (%) | (%) | (\$ m.) |
| Sweden | 0.38 | 0.82 | 0.99 | 779.4 |
| Netherlands | 0.61 | 0.82 | 0.85 | 899.6 |
| Norway | 0.32 | 0.70 | 0.82 | 294.9 |
| France | 0.66 | 0.62 | 0.63 | 2 393.9 |
| Denmark | 0.38 | 0.56 | 0.61 | 255.4 |
| Canada | 0.42 | 0.46 | 0.51 | 991.5 |
| Belgium | 0.46 | 0.51 | 0.46 | 371.0 |
| Australia | 0.59 | 0.42 | 0.45 | 426.6 |
| United Kingdom | 0.36 | 0.38 | 0.38 | 914.1 |
| New Zealand | 0.23 | 0.41 | 0.35 | 50.4 |
| Germany | 0.32 | 0.31 | 0.37 | 1 386.0 |
| Austria | 0.07 | 0.12 | 0.24 | 117.8 |
| United States | 0.31 | 0.25 | 0.22 | 4 123.0 |
| Japan | 0.23 | 0.20 | 0.21 | 1 420.9 |
| Switzerland | 0.15 | 0.19 | 0.19 | 118.0 |
| Finland | 0.07 | 0.18 | 0.17 | 48.7 |
| Italy | 0.16 | 0.13 | 0.09 | 168.0 |
| Total | 0.34 | 0.33 | 0.31 | 14 759.2 |

CENTRE FOR INDUSTRIAL DEVELOPMENT



BUSINESS OPPORTUNITIES

The ACP-EEC information service

One of the obstacles to industrial cooperation between the ACP and EEC states is the difficulty of obtaining existing information and the consequent problem of identifying economically viable projects to be set up in the ACP states. Hence it is imperative to have easy access to information, market surveys, technical processes, rules and regulations, etc.

The Centre intends to narrow this communication gap between the EEC and ACP and to this end is in the process of establishing an ACP-EEC Information Service. The objective is to stimulate EEC firms to set up viable enterprises in the ACP states, to the mutual advantage of both.

A brochure will be published shortly by the Centre and can be obtained on request. It will elaborate on the kind of information that the Centre can provide and will also give guidelines regarding the methods of procuring information from the ACP-EEC information service.

In the meantime, please do not hesitate to submit your requests, giving us as much detail as possible concerning your enquiries. Please write to:

The Centre for Industrial Development
451, Avenue Georges Henri
1200 Brussels
Belgium

The following are examples of the type of questions that the Centre would be in a position to answer:

— Import regulations of the Community

The Centre can provide information regarding import regulations in the Community.

— Raw materials essential to a particular industry

If you are considering to set up a particular industrial enterprise, we expect to be able to provide the following information:

1. The nature and source of raw materials required for the manufacture of a given product.
2. In the case of a raw material like clay, we should be pleased to get it analyzed for its suitability, for the manufacture of certain products, e.g. bricks, tableware.
3. If the raw materials concerned have already been analyzed locally, we will be in a position to provide the answer to the question as to whether or not they are suitable for the manufacture of a specified product.

— Scales of manufacture

The viability of an industry is dependent on a variety of factors, the most important of which is the matching of the scale of production with the size of the market. If the setting-up of a manufacturing enterprise is being contemplated, we would welcome enquiries concerning the minimum scale of production. If the size of the local market is known, we would be in a position to suggest a production process on an appropriate scale for the market.

— Community markets

If you are intending to manufacture for export to the EEC and require information on the market situation in the EEC, we would provide you with the information on such factors as the typical import prices, the nature of the market in Europe and conditions and terms of trading.

Similar assistance would be given regarding raw materials and semi-processed commodities intended for export.

— Industrial patents

The Centre can provide information concerning the existence of patents in particular industries. Negotiations regarding the patent will be a matter between the interested party and the owner, although the Centre will be willing to assist.

— Science and technology

If you are looking for the latest scientific or technical information, the Centre would endeavour to provide the latest published papers.

— Industrial use of domestic, agricultural and forest waste materials

If you need information on suitable industrial processes for the utilization of waste materials, please send us your request specifying the type and quantity of waste materials available.

— Industrial partners

The Centre would be pleased to assist ACP entrepreneurs in the identification of EEC joint venture partners. In order to do this effectively, the Centre normally requires basic information, such as the type of product to be manufactured, the size of the market and the ruling market price.

EEC industrial partners wanted

LESOTHO

Wool and mohair processing Ref. 73/78

The Lesotho National Development Corporation invites the participation of a joint venture partner in the processing of wool and mohair. No restriction has been placed on the scope of the project and thus the project definition could include all processing, from scouring to manufacture of finished products. Feasibility study report is available at the Lesotho National Development Corporation.

Processing of dairy products Ref. 74/78

The Lesotho National Development Corporation is looking for a business partner to process locally-produced milk in order to produce butter, cheese, ice cream and/or similar products. The anticipated quantities of milk for processing are estimated to be 487 400, 1 460 000, 2 986 800, 3 061 600 and 3 141 500 litres during the first, second, third, fourth and fifth years respectively.

Poultry production Ref. 75/78

The Lesotho National Development Corporation proposes to embark on an integrated poultry production project. A pre-feasibility study report and a project memorandum can be obtained from the CID. Furthermore, the Centre would be prepared to discuss a contribution towards financing the necessary feasibility studies. A joint venture partner is invited to participate in the financing of the hatchery and rearing farms components of the project.

Abattoir and cannery Ref. 76/78

Construction of an abattoir to produce approximately 15 tonnes of meat per day is due to commence soon in Lesotho. After supplying local needs, approximately 10 tonnes per day will be exported to the neighbouring territories as chilled meat or canned meats.

The facility will be constructed to the highest standards of construction and hygiene laid down by the EEC. A private investor is invited to participate in the cannery aspect of the project.

Tannery Ref. 77/78

Lesotho currently produces about 40 000 to 50 000 hides and 140 000 skins per annum. The abattoir is likely to raise

the figure to 75 000 and 190 000 for hides and skins respectively. The Lesotho National Development Corporation would appreciate the participation of a joint venture partner in a tannery project to process the above-mentioned quantities of hides and skins.

Asparagus cannery Ref. 78/78

The Lesotho National Development Corporation is looking for a business partner to set up a plant for the canning of asparagus for export.

Brick-making Ref. 79/78

The Lesotho National Development Corporation is looking for a joint venture partner to establish a brick factory with a production capacity of approximately 12 million bricks a year.

Ceramics Ref. 80/78

The Lesotho National Development Corporation invites private investors to participate in a joint venture to establish a ceramics industry in Lesotho, using local clay.

Components assembly Ref. 81/78

The Lesotho National Development Corporation would welcome proposals from European industrialists to establish electronic assembly operations with a view to exporting the finished product. The contribution expected from the EEC partner would include technical and managerial know-how, capital participation and the marketing of the finished product.

Real estate development Ref. 82/78

The Lesotho National Development Corporation invites EEC joint venture partners to invest in real estate development in Lesotho, particularly in the fast-growing town of Maseru.

Enquiries regarding all the proposed projects for Lesotho should be addressed to:

**The Lesotho National Development Corporation,
P.O. Box Ms 666,
MASERU,
Lesotho.**

Mineral insulation materials Ref. 83/78

The Kenyan Industrial and Commercial Development Corporation in Nairobi would like to establish contact with EEC firms interested in a joint venture for the production of rock-wool and vermiculite.

Kenya has adequate reserves of basalts and vermiculite.

Prefabricated houses and furniture Ref. 84/78

A private Nigerian company, which is currently expanding its saw-milling, veneer and fibreboard operations, is looking for an EEC joint-venture and technical know-how partner for the manufacture of prefabricated houses, on the basis of cement particle boards, and various types of furniture for the local market.

Printing press Ref. 85/78

A Nigerian private sponsor is looking for an EEC technical and financial partner for the establishment of a printing press to produce magazines, school materials and other products such as exercise books, accounting ledgers and writing pads. Please contact CID for details.

Electric light bulbs Ref. 86/78

A private Nigerian sponsor is looking for an EEC technical partner for the manufacture of light bulbs. The EEC partner

would be expected to supply the machinery and raw materials, as well as some of the initial capital outlay. The Nigerian promoter has already purchased land for this project, undertakes to build the factory and market the product, and guarantees the repatriation of foreign capital and share profit as well as 50% of foreign staff salaries.

PVC compounding

Ref. 87/78

A private Nigerian sponsor is looking for an EEC technical and financial partner for the setting up of a PVC compounding factory. The ratio of investment desired would be 60:40, i.e. 60% local share capital and 40% foreign.

Bottling plant

Ref. 88/78

A private Nigerian sponsor is looking for a business partner with a view to setting up a medium-sized bottling plant. 40% foreign share capital is required.

Pharmaceutical products plant

Ref. 89/78

Following a decisions by the Council of Heads of States of UDEAC (Customs and Economic Union for Central Africa), Cameroon, Congo, Gabon and the Central African Empire plan to establish a pharmaceutical products plant at Bangui. The CID will undertake a feasibility study for establishing such a unit and invites EEC firms to contact the CID should they wish to participate in the project. The cooperation may take the form of studies, know-how, financial participation or commercialization.

Industrial processing of honey

Ref. 90/78

Honey is produced at cottage industry level in the north of the Central African Empire. CAE promoters are planning the industrial production of honey, beeswax and biscuits based on honey, for local and export markets. The CID proposed to undertake a feasibility study for this project. EEC firms interested in principle in the establishment of this unit are invited to contact the CID.

Manufacture of agricultural machinery and implements

Ref. 91/78

Central African Empire promoters are looking for European partners to set up a company for the manufacture of agricultural machinery and implements. EEC firms interested in principle in the establishment of the project are asked to contact the CID.

IVORY COAST

Ref. 92/78

The Ivory Coast Enterprise Promotion Board, in collaboration with private promoters, has drawn up a list of the following 30 small-and medium- scale industrial projects:

1. Manufacture of wax
2. Manufacture of domestic water filters
3. Manufacture of bituminous products
4. Manufacture of electric cables
5. Manufacture of buttons
6. Manufacture of asbestos-cement products
7. Manufacture of polyvinyl chloride sheets (with or without textile holders)
8. Manufacture of perforated valleys
9. Manufacture of soldered wire netting
10. Manufacture of metallic fence
11. Manufacture of plaster tiles
12. Manufacture of self-sticking labels
13. Manufacture of blinds and covers
14. Manufacture of wire paper-clips, pins, staples for office use
15. Manufacture of agricultural hand toolings
16. Manufacture of toys
17. Manufacture of spring mattresses
18. Manufacture of umbrellas
19. Manufacture of metallic or plastic zip fasteners

20. Manufacture of glass-reinforced plastic products
21. Manufacture of products from soldered plastic sheets
22. Industrial production of ice cream
23. Industrial production of delicatessen
24. Manufacture of high voltage electric poles
25. Industrial manufacture of carpets
26. Production of pineapple and banana vinegar
27. Production of avocado oil
28. Manufacture of hardware
29. Manufacture of locks, bolts, padlocks
30. Manufacture of standard chains.

Industrialists are invited to come forwards as joint venture partners.

Requests from ACP states

Projects related to the construction industry

Ref 93/78

Several ACP states are implementing programmes for the construction of low-cost housing (\pm 20 000 lodgings per year) and have requested the CID to submit technical or joint venture proposals for the following projects:

- laterite brick plant,
- plant for the manufacture and assembly of tap components,
- electric light bulb plant,
- plant for the manufacture of electric equipment such as plugs, switches and fuses.

EEC organizations, companies, institutes and research centres which can make technical or financial contributions to such projects are invited to contact the Centre.

EEC firms looking for ACP partners

Bricks

Ref. 94/78

A Belgian firm would like to cooperate with ACP entrepreneurs for the setting up of a brick factory. The European company is offering technical and financial assistance.

The proposed capacity of the plant is 15000 tons per annum, which represents approximately 7 million standard bricks. This is a small-scale plant, since the average capacity of a European firm is about 40000 tons per annum.

The cost for the plant and know-how would be in the region of BF 12 m. The cost of building would be approximately BF 5.5 m, if constructed by the European company.

Glass Re-inforced Plastic Components

Ref. 95/78

An established U.K. company is interested in extending their overseas involvement, by either joint ventures or management contracts. The company is already successfully operating two Middle Eastern subsidiaries using trained local labour. Components for manufacture would cover the automotive, building, marine and general engineering industries.

The participation of the U.K. company in a joint venture would consist of technical and managerial know-how, capital participation and the marketing of the finished products within the region.

A description of the process and its commercial aspects is available at the Centre.

Beverages and Confectionary

Ref. 96/78

A Belgian firm is looking for project opportunities and joint-venture partners in the ACP States in the following fields: beer brewing, soft drinks, biscuits and confectionary.

Interested parties in the ACP countries are invited to contact the Centre.

CID mission to the Caribbean

The CID launched an industrial promotion mission to the Caribbean from the end of June to the beginning of July 1978.

All 7 Caribbean Member States of the Lomé Convention (Bahamas, Barbados, Grenada, Guyana, Jamaica, Trinidad & Tobago and Surinam) were visited and a great number of project opportunities were identified. The mission report is still under preparation and in the next issue of Business Opportunities, the CID will publish the relevant information on the above-mentioned projects.

On this occasion, the CID delegation took an active part in the Regional Seminar on Industrial Promotion which was held in Port of Spain from June 26th-30th 1978 and also in the Symposium on Exports which took place in Kingston from July 2nd-8th 1978.

CID mission to Cameroon

The Director of the CID visited the United Republic of Cameroon from July 10th-12th 1978.

During the course of his discussions with the Minister for Economic Affairs and Planning, an agreement on the following six agro-industrial projects was signed:

1. Production of margarine and edible oil
2. Development project for the growing of maize
3. Plant for the industrial rearing of one-day-old chicks and for the production of fodder
4. Agricultural project
5. Production of tomatoes and their processing into concentrate
6. Fruit juices and jam production

Pursuant to this agreement, the Afrika Asien Bureau drew up preliminary project proposals on the above projects. These have been submitted to the Cameroonian Authorities as well as to EEC industrialists for evaluation. Final project proposals will be prepared following completion of market surveys and determination of technical processes to be applied.

The potential EEC investors and the CID will share the foreign exchange costs on a fifty per cent basis, while the Cameroonian Government will bear the local costs.

Preliminary discussions concerning the industrialization of the Cameroon were held with the Directorate for Industry of the Ministry of Economic Affairs and Planning as well as with agencies in the private sector, viz. the National Investment Corporation of the Cameroon (which has Mr. M.A. Bello as Board Chairman) and executives in the Chamber of Commerce.

Adapted Technology Inventory

The Centre has initiated studies in collaboration with the David Livingstone Institute of Strathclyde University, Scotland to construct an appropriate technology inventory which would have relevance for the ACP States associated with the EEC through the Lomé Convention. In pursuit of this, a candidate list of 24 technologies has been identified for each of which a "profile" is being drawn up giving some basic information on the process operations, the raw material requirements, the labour input, the specifications of market size and capital costs.

News of suitably adapted technologies will be gladly welcomed for addition to the inventory if they conform to the following specifications:

- 1) Technology should relate to the economic and social environment of the ACP States preferably the rural sector
- 2) Technology should offer high added value and social rate of return in ACP countries

- 3) Technology should offer development possibilities to least developed countries or sectors of the economy
- 4) Technology should be product oriented
- 5) Technology should be of small to medium investment capacity

Glass Containers

Ref. 97/78

The Centre has identified a growing number of opportunities in the ACP States for the manufacture of glass containers. These countries have all or most of the raw materials but in general the market which they have to capture is lower than the minimum which the Centre thinks is viable under normal operating conditions. The minimum is 33 million bottles a year whereas the markets may lie in the range of 20-25 millions a year. The Centre is particularly interested in encouraging EEC industries to rethink the manufacturing processes in order to develop a factory which produces at the lower scale, i.e. 20 million or so and takes advantage of the lower labour costs and reduce capital equipment involved; the end objective is to have a lower scale of production, lower capital cost and yet maintain the unit cost of production.

The Centre may be prepared without prejudice to give some financial assistance for interesting proposals if this re-development can be made.

Ceramics

Ref. 98/78

In line with its desire to encourage those industries which use local raw materials, the Centre is trying to assist ACP States develop ceramic industries. In this connection, the Centre has studied the production of ceramic tiles, sanitary ware and tableware. At the moment, the minimum scale of production for these products is as follows:

ceramic tiles: 325 000 square metres per annum;

sanitary ware: 70 000 assorted pieces per annum (approximately 1 000 t p.a.);

tableware: 120 000 dozens of mixed products.

We feel this is high and we welcome proposals from manufacturers for manufacturing plants at lower scales.

A QUICK RESPONSE

If you are interested in any of the items mentioned in this periodical, send us a telex quoting the reference and we will send you further information when it is available.

Address all correspondence to:

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"Business Opportunities"
451, Avenue Georges Henri
1200 BRUSSELS,
BELGIUM.**

**Telex No. CDI 61427
Telephone (02) 7358073.**

ECOWAS

Dr. Ouattara explains why it's off to a slow start

Some 150 million people in 16 states, 9 French-speaking, 5 English-speaking and 2 Portuguese-speaking, these are the crude facts about ECOWAS, the Economic Community of West African States. Since 1975 these countries, which form a single block covering what can be regarded as the whole economic region of West Africa, have been moving towards the setting up of an effective economic community. Progress has been slow, partly, as Dr Ouattara, secretary-general of ECOWAS, explained in an interview with the *Courier*, because of the need to get off to a good start rather than trying to do too much too quickly. It must also be said that the ECOWAS countries are embarking on a difficult path. A membership of 16 makes it a large community by international standards, and the land area of over 6 million km² is

vast. Drawing together such an area, with so many diverse national economies, is not easy. The original Lagos treaty recognized the problem by providing an outline for the community; the details are now being filled in; and the hope is that in just over a year from now a series of concrete programmes and policies can be introduced for the whole area. Although the decision to create ECOWAS was clearly a political one, the initial emphasis is on the more obvious areas of economic cooperation: transport and communications, customs and trade, industrial and agricultural production. Despite the enormous hurdles, Dr Ouattara thinks the community is viable:

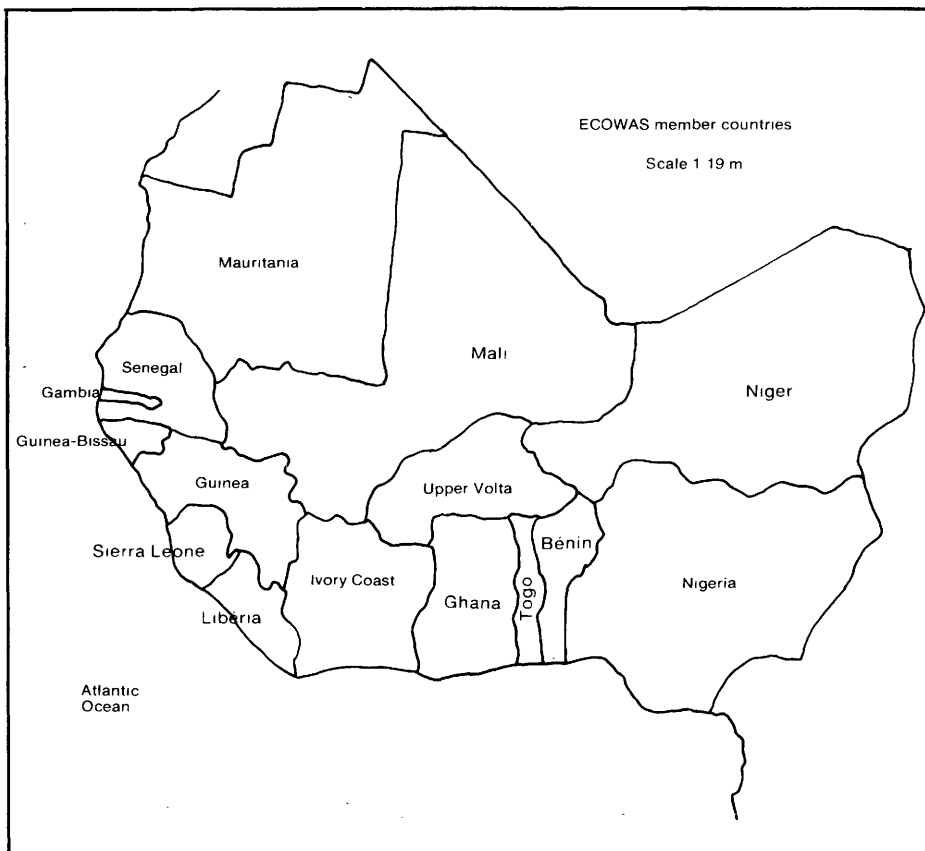
'From all points of view it makes sense to create a grouping like ECOWAS. First, from the economic point of

view, that part of the African continent is among the leading producers of a very important number of mineral resources, and some of the countries have made major progress in agricultural development. The region has about 45% of the population of black Africa. It is certainly the largest single market in Africa. The natural resources endowment is substantial and cuts across frontiers. So there is something on which to build a viable economic grouping. There are many other factors that will strengthen economic cooperation. The cultural heritage of the region is fairly homogeneous and this is a very important consideration which will strengthen economic potential. The Community is also a relatively homogeneous geographical entity. If we had been scattered around with many non-members in between, it would have been difficult, but it is in fact a single block on the map.'

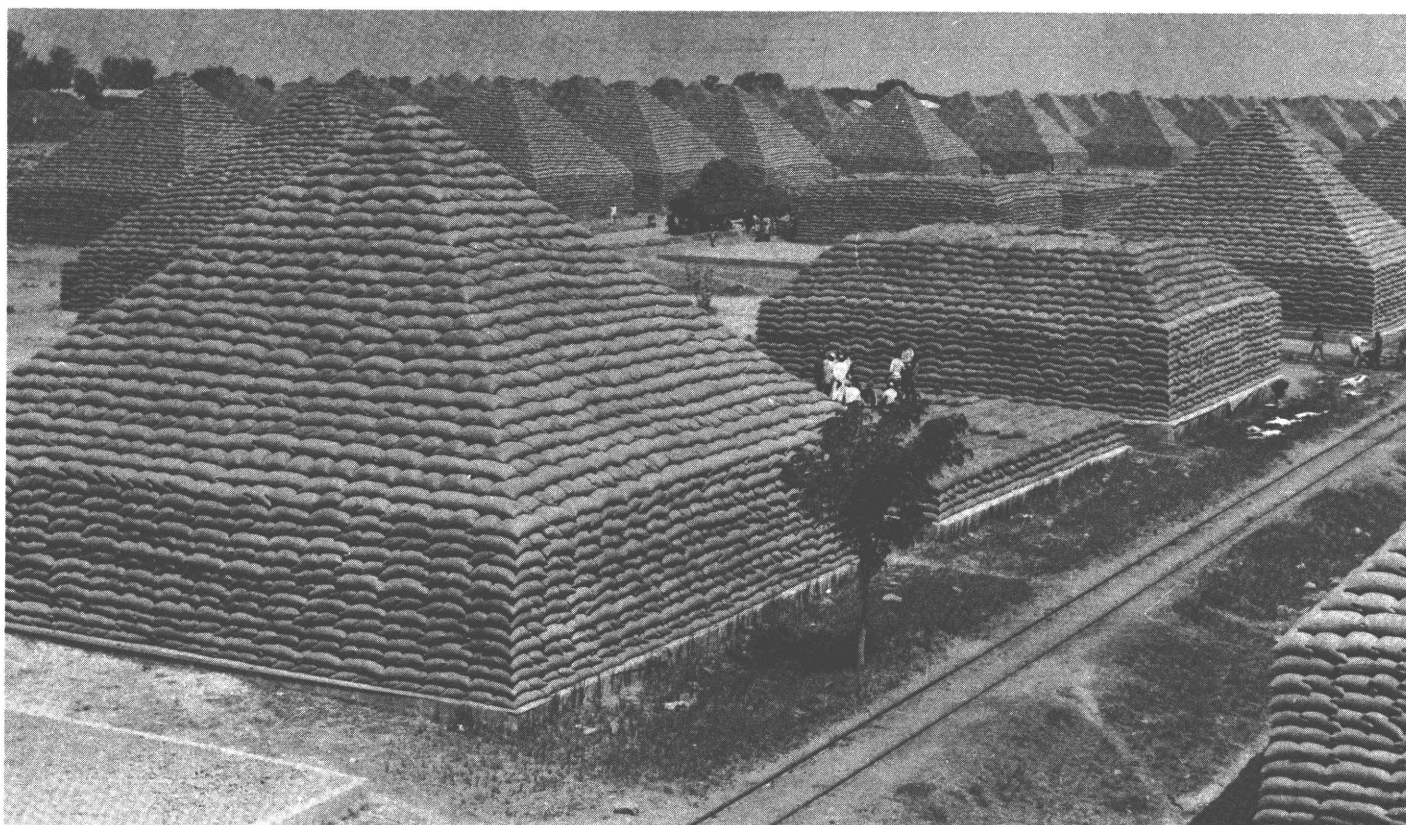
For the moment sixteen is enough

In a sense ECOWAS has now reached its maximum size of 16. The original 15 have been joined since by Cape Verde and if it were to expand further the question would be to where? To the north are the Arab Mediterranean countries and to the East the UDEAC(1) states. Dr Ouattara insists that there is no barrier to new members, and the community would consider sympathetically any application for membership. Nor did a preoccupation with internal matters mean, he said, that there would not be growing contacts with other organizations in Africa.

'Our immediate concern is not really enlarging the Community but strengthening the basis of cooperation. But we want to be as open as possible to the outside world. We are working very closely with the ECA, and we feel that what we are doing can only be a positive contribution to the strengthening of the OAU. The secretary-general of the OAU attended the last ECOWAS summit meeting and he has invited me to attend their coming meetings. We must keep that kind of effective and constructive cooperation going. As for the Arab League, so far there hasn't been a formal relationship between the League and ECOWAS, but certainly in



(1) UDEAC — the central African economic and customs union.



Stocking groundnuts, a major ECOWAS export

due course there will be some possibilities of working closely with them. So far the ECA has helped ECOWAS in many ways, particularly in carrying out some of the important studies we are doing now, studies that are aimed at providing an information base for drafting the policies and programmes of ECOWAS for the future.

Our treaty is a framework, and the contents need to be put in. To do that we have to embark on a major research programme which will end with the formulation of policies and programmes of cooperation for the whole of West Africa.'

The studies that are underway cover most areas of possible economic cooperation in the early years of the community. Dr Ouattara could not say for the moment what would be the most important policy area. 'It is difficult to say where we will put the emphasis.

"But there are intuitive priorities like transport and communications. Almost everybody will agree that in the context of Africa, it is absolutely necessary to develop a transport and communications network if cooperation is to be effective and constructive. There is no way of cooperating between member countries if there is no communication link. A major research programme on transport and communication is now on and we hope that by the end of this

year or the first half of 1979 we shall have a clear idea of where we want to go in terms of development of infrastructure, and then propose a plan of action for the development of the modes of transport in an integrated way in West Africa. This is the least debatable area of priority, less that is than industrial cooperation, agriculture, and trade."

The present transport infrastructure of the ECOWAS countries is primarily directed to the outside world. Intra-ECOWAS communications are often very poor, and trade too follows the same colonial pattern.

In Europe the dismantling of trade barriers between the EEC member states stimulated intra-EEC trade which was already substantial. But since trade within ECOWAS represents such a small proportion of each member country's exports and imports, would the dismantling of tariff and non-tariff barriers really stimulate much economic activity?

'I believe that integration groupings in different circumstances and different locations have different problems. In the case of West Africa it is true that intra-community trade is very small. On this I have one observation to make. We are talking about official statistics but it is known that there is a substantial amount of unrecorded trade now

going on in West Africa. The real volume of intra-West African trade is **not** known so this qualification needs to be made. I believe that the creation of the community will be very vital, not only in terms of developing trade, but in terms of developing the production capacity of West Africa.'

Protecting the weaker

For geographical, historical, geological, and many other reasons, some of the West African countries are stronger economies than others. There is a danger that those stronger economies will get all the benefits from the Community, perhaps at the expense of the weaker. 'A community like ECOWAS creates opportunities but can also create unequal access to opportunities', as Dr Ouattara put it. To deal with this problem ECOWAS has already set up a fund for cooperation, compensation, and development based in Lomé. Member countries who lose revenue as a result of the creation of the free trade area or the implementation of provisions of the treaty will be compensated. There is also a development aspect to the fund.

The objective is to put as much emphasis as possible on the needs of the least developed countries of the community.

Ties with the EEC

ECOWAS already has a growing relationship with the EEC; all 25 ECOWAS and EEC countries are already working together within the Lomé Convention, which itself aimed to encourage regional cooperation among the ACP states. ECOWAS is the largest economic community within the ACP group and Dr Ouattara believes cooperation between the two sides can increase. 'We have embarked on major research programmes, and the Community has helped in this exercise and will help in the future. The Community has helped us in particular, in our trade studies which is a very important exercise, and has also helped finance part of one of the sub-projects of the trade studies. We have been given an assurance that the Community will very positively consider financing part of the industrial survey that we are about to launch.

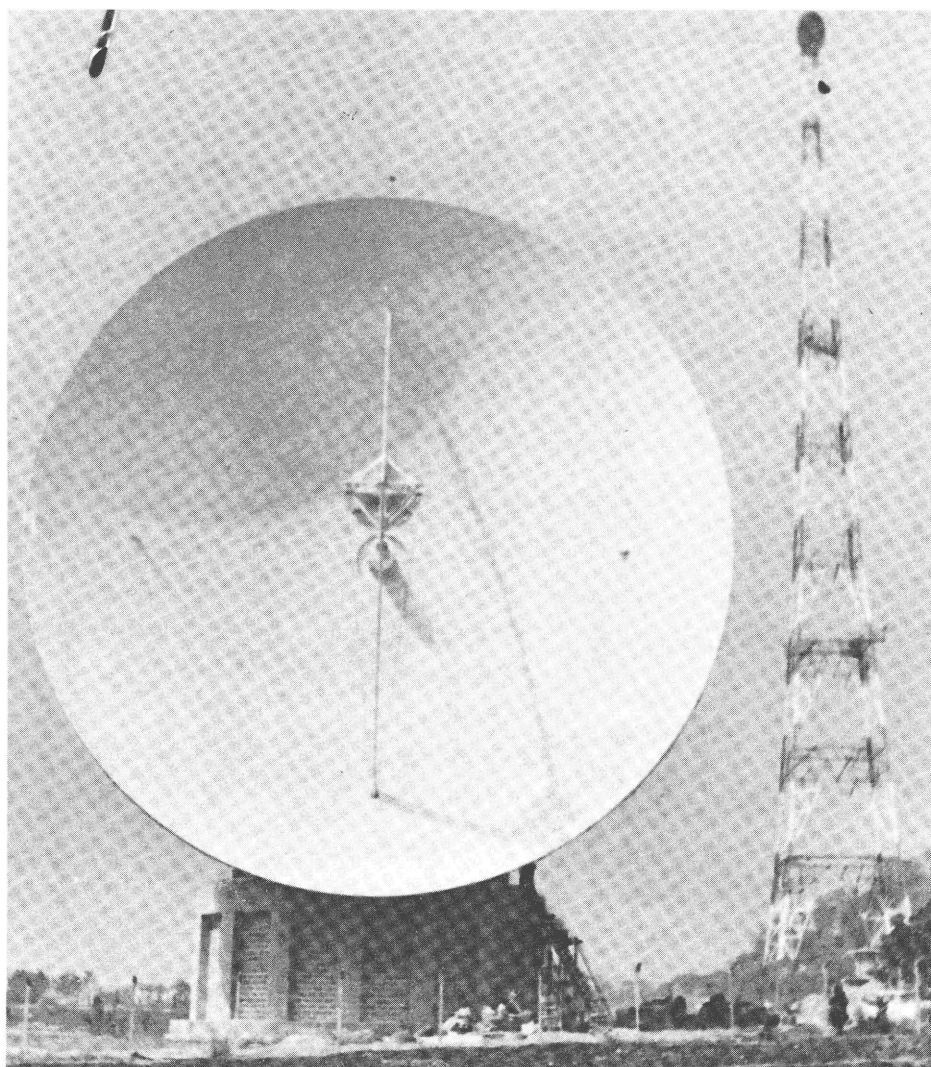
As far as learning from the EEC's experience is concerned, it must be remembered that the environments are different, West Africa is not western Europe. Nevertheless we have tried to look at what Europe has done, and tried to learn as much as we can, keeping in mind that the environments are quite different. In some cases, obviously, the experience of Europe will be helpful'.

But where is ECOWAS going politically? Is the aim some form of federation? Dr Ouattara would not be drawn on the long-term aims, 'the treaty emphasises economic cooperation', he said, 'this would lay the foundation for a later move in a different direction'. He agreed that political and economic cooperation went together, but ECOWAS was at an early stage. 'It's difficult for anybody to project what an organization such as ECOWAS will be like in 30 or 50 years time.

What we are aiming at is basically to provide, in that part of Africa, an instrument that will help us express our solidarity and be the instrument for the effective development of the region. We believe that we cannot develop effectively outside a framework like ECOWAS. As to what political developments will help achieve that, we would like to keep an open mind.

Maybe in 20 years time, we will see where we are, and if we have managed to build a strong economic base, helped by political will, then we may look at further developments. This is part of the development process, of cooperation in this region; where we will go depends on our success and the difficulties we meet along the way'.

IAN PIPER



Earth satellite station at Lanlate (Nigeria)
Communications are an ECOWAS priority

Membership of African regional organization among the ECOWAS states

| | OAU | ECA | Entente Council | OCAM | MANO RIVER | OMVS | CILSS | LIPTAKO GOURMA | CEAO |
|----------------|-----|-----|-----------------|------|------------|------|-------|----------------|------|
| Benin | x | x | x | x | | | | | |
| Cape Verde | x | x | | | | | x | | |
| Gambia | x | x | | | | | x | | |
| Ghana | x | x | | | | | | | |
| Guinea-Bissau | x | x | | | | | | | |
| Guinea-Conakry | x | x | | | | | | | |
| Ivory Coast | x | x | x | x | | | | | x |
| Liberia | x | x | | | x | | | | |
| Mali | x | x | | | | x | x | x | x |
| Mauritania | x | x | | | | x | x | | x |
| Niger | x | x | x | x | | | x | x | x |
| Nigeria | x | x | | | | | | | |
| Senegal | x | x | | x | | x | x | | x |
| Sierra Leone | x | x | | | x | | | | |
| Togo | x | x | x | x | | | | | |
| Upper Volta | x | x | x | x | | | x | x | x |

Energy in the ACP

Oil refinery at Abidjan (Ivory Coast)



States

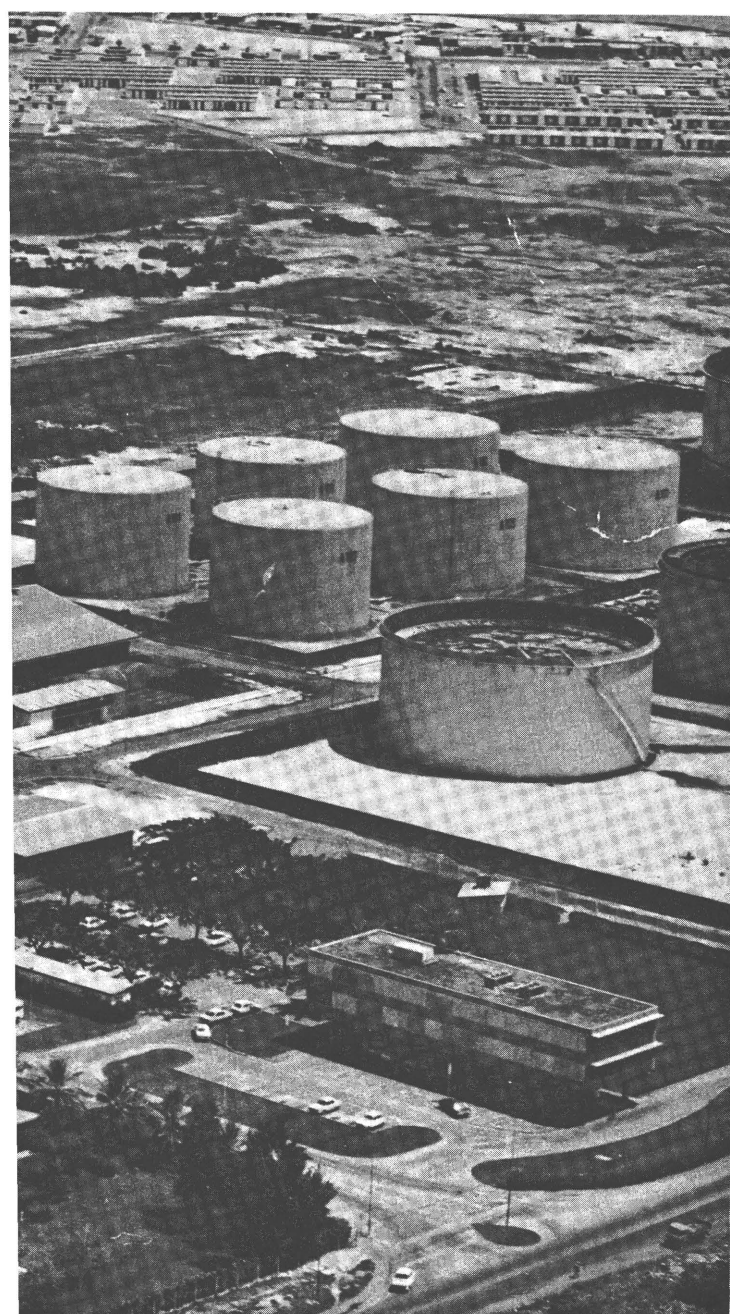
Five years after the oil crisis, the economic, scientific and especially the political ramifications of the world energy situation have become as complex as its importance has become clear. Energy is a key issue for industrialized and developing countries alike.

The present system of energy production and distribution will not be able to cope with future demand. Although the rich countries can tighten their belts and pay more, the poor countries cannot. Their development plans have been crippled by the higher cost not only of the oil but also of the manufactures they import, as the industrialized and the oil-producing countries have been playing leapfrog with the prices of their respective exports since 1973. And the poor countries are going to need a lot more energy, if only to feed themselves. The Third World has about 71% of the world's population and only consumes 16% of its energy.

The developing countries face critical shortages of other resources as basic as food and water. But, unlike these, most of the energy now being consumed is non-renewable. It will be a long time yet before it runs out, but it is already too late for the poor countries to benefit from the cheap energy that powered Western industrialization.

The oil crisis called attention to the depletion of the world's natural resources. Research into renewable energy has since intensified considerably, and a period of transition has begun in which we are turning from hunting our energy to farming it. But in the foreseeable future, both rich and poor countries will remain heavily dependent on oil.

As the Commission of the European Communities launches a wide-ranging set of ideas on development cooperation in energy, starting with a proposed 10 million u.a. to inventory the developing countries' present and potential resources, our dossier examines the relationship between the energy situation and development, particularly in the ACP countries.



'The time has come for closer EEC-ACP cooperation on energy'

Guido Brunner, EEC energy commissioner

Commissioner Brunner recently suggested the EEC Council of Ministers that specific aid should be considered for the developing countries, and the ACP group in particular to help them develop their own sources of energy. The *Courier* asked the EEC energy commissioner about this new initiative.

Energy, a basic factor of general economic activity and simply of daily life, has posed a considerable problem for the world economy since 1973. The European Community, in particular, is a major importer of energy and is well aware of the need to reduce its energy dependency on external supplies and diversify its sources of energy imports. The problem for Europe is what kind of energy to choose for the future. Mr Brunner gives the facts and figures, outlines Community policy and looks to a future where cooperation with the Third World, and the ACP states in particular, plays a major role.

1985 targets — cut oil imports, save energy, cooperation with the developing countries

— The Community's energy policy should, of course, be developed and it should have more means of action than it has at present. This is true of the financing of energy investments and it also involves certain legislation being harmonized within the Community. Overall, our aims are clear. We want to progressively reduce our oil imports from their present level of about 57% of our energy consumption to 50% by 1985. We want to save energy and use our resources to better advantage. So far, there has been a one-to-one ratio between GNP increase and energy consumption and we want to reduce this to 0.8%. Then we want to fix a ceiling in absolute figures for oil imports, which means restricting them to 500 million t p.a. until 1985. We think this is a coherent policy which we expect to lighten the considerable load that imported energy places on our balance of payments. Such a policy would also mean that we could open our frontiers wider to imports from third countries and maintain or even increase our exports to them, and it should give us further possibilities of financing economic cooperation with our developing partners.

The aims of our energy policy are thus in keeping with the interests of the ACP countries. We also think that, generally speaking, the time has come for us to begin cooperating more closely with them on energy matters. It is in their interest to avoid the mistakes which we Europeans made prior to 1973 and we think they can do so. We should, along the same lines, take stock of their needs and their possibilities and develop with them a system of cooperation on this basis. If we could open the way for cooperation of this kind, we would avoid the developing countries' having excessive balance of payments burdens. Account should also be taken



Guido Brunner in action during the public hearings on nuclear energy, held in Brussels from 24-26 January 1978

"the development of nuclear energy is impossible without the support of the public"

of the fact that ACP energy consumption will probably have trebled by 1990 and that their oil imports are already a considerable burden. So, by helping them develop their own resources by the transfer of energy-saving techniques and giving them financial support for further prospection and exploitation, we can provide the ACP countries and the developing world in general with a stabler and clearer energy consumption outlook than we Europeans had in the past. This is what we are aiming at. These are our guidelines for action. We hope to be able to develop them during the negotiations with the ACP countries.

1979 budget — threefold increase

► The Commission's recent proposals for the 1979 budget include, 241 million u.a. for the energy sector, three times the 1978 figure. Why is energy the sector with the biggest budget increase?

— In absolute terms, this threefold increase is relatively large, but if the figure is analyzed, it emerges that it really represents only 2% of the energy investments of the Member States. However, these extra means are essential to launch energy saving and alternative energy projects. In addition, we should ensure that coal gets more support in the Community and we have set a 250 million t coal production target for 1985.

We think these budgetary increases will enable us to embark on concerted action to obtain the joint experience which is a necessary basis if we are really to consolidate relations between the EEC and the industries in the Community energy sector. So the trebling of our resources is not especially dramatic. It is simply natural, organic support for a preconceived policy.

► *Is the Euro-Arab dialogue a useful forum for discussion of the oil question?*

— We should use our relations with the Arab countries to bring about closer cooperation in this sector, paying particular attention to what is going on in the Organization of Arab Petroleum Exporting Countries. The Arab countries are getting beyond the stage of organizing work in the oil sector pure and simple and beginning to enter the energy sector as such. Their field of action is expanding and if they follow this path and, for example, set up an energy institute, we should use this as a basis for strengthening our ties with them. So I could well imagine cooperating with OAPEC members on energy projects in third countries.

► *You are on record as having said that 'those who don't want nuclear energy must be prepared to pay for refusing it in terms of growth and employment'. Would you comment on this?*

— We have a target for 1985. By then we want to be producing about 160 gigawatts of nuclear energy. But we already know that we will be unable to meet this target and production will only be around 80 or 90 gigawatts, which means that we shall not reach our planned figure of producing 13% of our energy by nuclear means. It will be 8 or 9% at most, probably a bit less. We must be clear about the fact that this means investment in Europe will slacken. And this in turn means there will be a certain slowdown in the creation of new jobs. Consider that in Germany alone nuclear investments are down some 15 thousand million marks (6 500 million u.a.) and the full implications of the nuclear cutback become clear.

But nuclear energy cannot be developed without the support of the public and it is therefore up to us to do our best to produce safer reactors, to do more to protect the public from atomic radiation and to continue with the dialogue we have begun with all the European organizations, unions, environmentalists and firms in the nuclear hearings.

Without this general dialogue we can't get started, there will be a brake on nuclear energy development it may come to a virtual standstill. It must be clearly understood that this would make it all the more difficult to cut down on oil imports. In the coming years we shall be importing a lot of oil. If we really do want to reduce our imports to 50% by 1985, then we must develop our other resources: coal and nuclear power.

Nuclear energy must be developed in a 'reasonable and measured' way

► *Last year the EEC had to contend with the Canadian*

embargo on consignments of natural uranium and this year there is talk of discussions with the US on supplies of enriched uranium. Isn't the EEC vulnerable in the field of nuclear energy as well as in the oil sector?

— It has to be admitted that the Community will never be self-sufficient in energy. Our own resources can never completely replace supplies from elsewhere and we shall always have to import large quantities. We need to develop nuclear energy as well as our oil resources not because of a desire to become independent but because, as oil prices rise, as they will do from 1980 onwards, the price of nuclear energy will become more reasonable. And then there is a need to diversify risks.

You should never, as the proverb goes, put all your eggs in one basket nor all your money on one horse. Knowing that we are and that we shall remain importers of uranium, we shall try to develop nuclear energy as well, in a reasonable and measured fashion.

► *The European press has given a lot of coverage to the JET (Joint European Torus) project, the world's biggest thermo-nuclear fusion research unit, to be built at Culham in the UK. The EEC is said to be ahead of the US and the USSR here. Without going into the details, would you explain what the project is all about and what advantages it has for the EEC?*

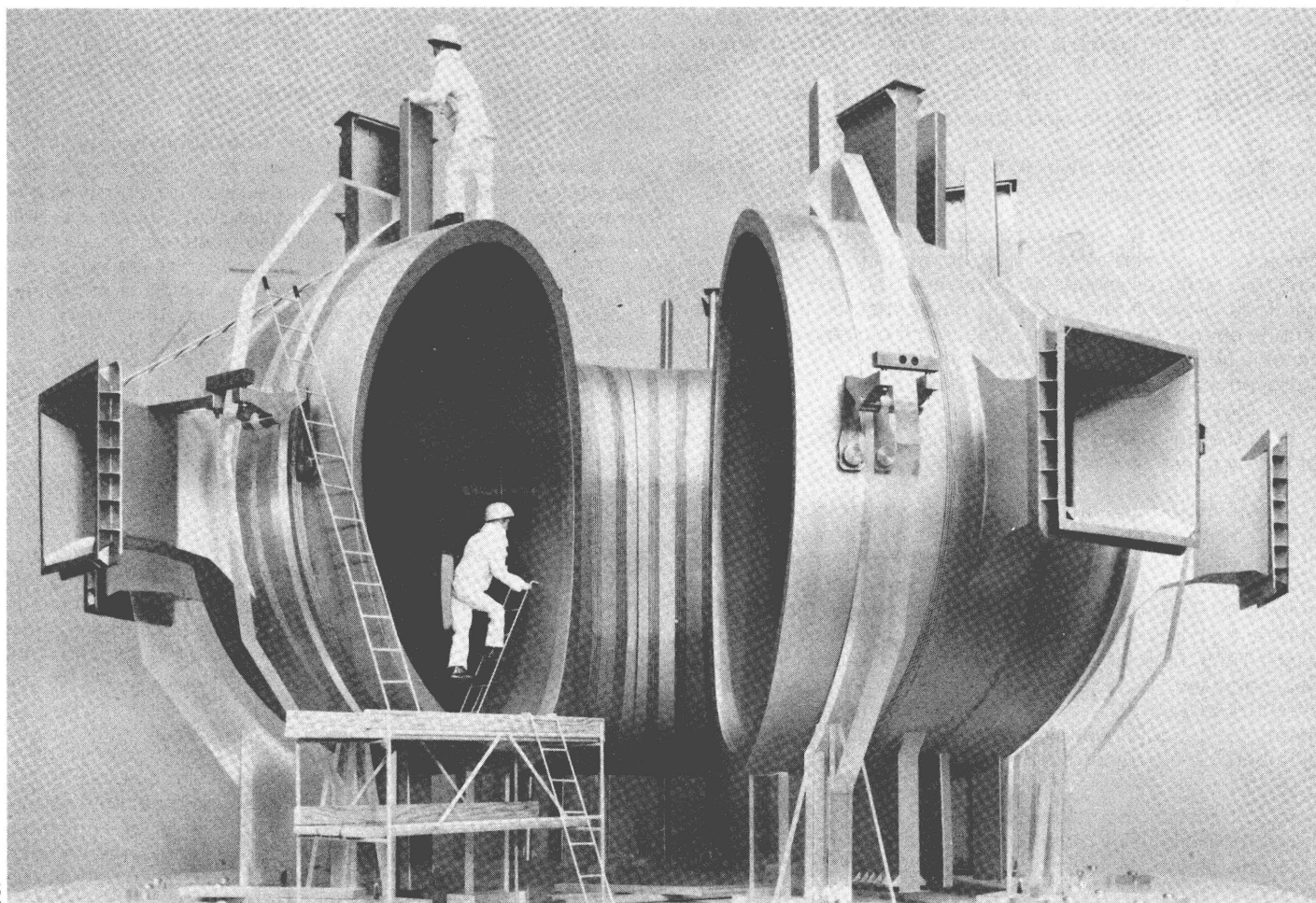
— This project is a great scientific and technological adventure. There is no guarantee that it will result in a fusion reactor, but, if it does, we shall have an inexhaustible supply of energy by the year 2020 or 2030 so it is of enormous interest. The cost and scientific effort it represents are also enormous. If the results are good, the JET project will be followed by a super-JET project for which even more substantial financing will be required. This second project may call for international cooperation. But it is important for the Community, which has produced the JET project thanks to the scientific network linking the various Member States, to continue along these lines. It is the greatest scientific adventure of the century.

None of the countries of the Community could handle the project alone, so it is, typically, a Community one and we believe we have prepared the ground for it well. We now have the regulations for the company which will be managing the project. Work is getting under way in the UK and I hope that, before the year is up, things will be ready for a team of scientists involving all the countries of the Community and, thanks to cooperation agreements, Sweden and Switzerland as well.

Helping the developing countries to develop their own sources of energy

► *You mentioned a proposal with 'wide implications at the last Council of Ministers for energy to look into the possibilities of specific aid for the developing countries to help them increase their own sources of energy. Was the proposal well received, and what arrangements might be made for its practical implementation?*

— It was a multi-stage proposal. During the first stage we would want to draw up an energy inventory with the ACP or other developing countries. The idea is to list the resources which these countries have and establish their requirements in the light of their probable economic growth. Many experts will be required to cooperate on this. It's a major undertaking. Political steps must also be taken and we need a basic



A model of the JET: the Community can jointly undertake a research project which would cost too much for a single EEC country

agreement with the ACP countries to make this beginning possible. Then comes the operational stage. Energy saving techniques will have to be transferred and we must contribute to prospection and the more rational use of oil, uranium and coal resources. In addition, more must be made of alternative sources of energy—solar energy, geothermal energy, wind power—and an effort must be made to develop biomass for energy.

We believe that all this will require a considerable, and gradual, effort. We cannot make headway in such a variety of fields all at once. We must first take stock of the overall situation. We shall identify the areas in which we can act together, so as to lighten the developing countries' burden of development financing. Their energy investments will absorb an increasingly large slice of their resources. And it should not be forgotten that their energy consumption will increase threefold by 1990 or 2000. So they must be helped with exploitation and financing so they can release resources which can be channelled into sectors other than energy. By acting together in all fields, but with certain priorities which we shall fix in the light of the inventory we produce jointly, we shall give new meaning to our cooperation with them.

► *Is the Community's energy policy very closely linked to its external policy?*

— Certainly. It is no longer possible to separate energy policy and internal growth policy from the Community's relations with third countries. These two aspects form a whole, because we can only spend the money once, either in the best way—in internal development with means of coop-

eration with third countries—or by making the mistake of not making the most of own resources and going into the vicious circle of balance of payments and growth crises. Neither aspect can be developed alone.

► *Doesn't this sort of policy of cooperation with the developing countries, and the ACP states in particular, involve some sort of contribution on their part, in the form of the construction of refineries in the developing countries for example?*

— We must be careful about the situation on the world refining market. For the moment and for several years to come, we are going to have surplus refining capacity in Europe and, to a certain extent, throughout the world. Any development of refining implies dependence on oil and so we must develop a policy whereby the refined products can be sold at lower rates in the ACP countries, so they do not have to have installations which create neither profit nor jobs. We are doing the right thing and analyzing the market and its probable development carefully. The most important thing is to work together, since any uncoordinated development of refining capacities would lead to a considerable waste of resources.

**A new Texas every six months,
a new Kuwait every three years**

► *Some ACP countries produce oil and some produce uranium. Do you think they will be providing a bigger share of Community supplies in the future?*



Mr Brunner with US energy secretary James Schlesinger: "the Community will never be independent energy-wise in the foreseeable future"

— Yes, I think they will. But their share in their own development will also have to increase. We think that some ACP countries still have considerable resources as yet unexplored and undeveloped, but it must be remembered that they will be bigger consumers than they are now. We shall very probably have a general oil shortage in the 1985/90 period and we should take it into account and cater for it. And we should also take account of the fact the shortage will go hand in hand with a price increase. So considerable attention should be paid to cooperation in the energy sector so as to avoid an international oil rush that would do nothing for the development of the world economy or the growth of the developing countries.

You get a better idea of what is actually involved if you realize that the current world demand is such that almost 20 million barrels a day are used and, in a few years' time, this will have gone up to 25, 40 or even 50 million. To cover this we would need to discover another Texas or another Alaska every six months or another Kuwait or another Iran every three years. This is out of the question, even though there is still the possibility of meeting some increase in demand by finding new deposits. So we must get organized to meet needs by energy saving and by developing sources other than oil.

► It was with this in mind that 28 countries held the first international Solar Energy Day on 3 May this year and various developing countries opened their solar laboratories to visitors. Some of the solar energy installations in the ACP countries have been developed with the help of the EDF. What do you think of the future of solar energy in Europe and in the ACP countries?

— I think solar energy will be more important in many of the ACP countries than it will in the EEC. We think that, in about the year 2000, solar energy will account for 5% of our requirements but that, in view of the geographical situation of the ACP countries it could well cover more than that there. At the same time, it is worth remembering that, for the moment, the technology is such that solar energy is mainly useful for heating water and houses. The transformation of solar energy into electricity is not yet a suitable process for large-scale industry. So this is something we must concentrate on. But solar energy can already help the ACP countries and we will help make their task easier via technical cooperation and aid with staff training and with industrial and agricultural development.

► At least one good thing came of the 1973 oil crisis. It provoked, developed and intensified a whole series of meetings, international conferences and debates on the new world economic order. Do you think that more progress can be made through the energy sector in future as regards greater cooperation between developed and developing countries?

— I hope so. I think that, starting with our close cooperation with the ACP countries we will see a new start to our efforts here. We feel that by leaving the theoretical debates behind and getting down to the brass tacks of cooperation, we will be able to establish the necessary dialogue between all oil producers, developed and developing countries. The EEC has an obligation to the ACP countries and to itself to do its utmost to see that these hopes are realized. □

Interview by
ALAIN LACROIX

The different sources of energy

A dozen different kinds of energy are described briefly here to give an idea of their characteristics and relevance to the developing countries. These sources are divided into two groups. The first group covers the commercial energy sources that are mainly used today — 'conventional' energy — of which fossil fuels and hydro-power are the most important. The second group covers the main non-conventional energy sources that could provide a serious alternative in future, especially for the developing countries.

The fossil fuels (coal, oil, natural gas) have one big drawback. They are not renewable. Although it may not be for a long time yet, sooner or later they will run out. Energy sources such as solar, hydro, wind and tidal power are renewable and therefore practically inexhaustible.

Fuel is either burned to produce energy directly (e.g. heat from wood and coal) or processed (electricity, petroleum products). In the industrialized countries, a high percentage of energy is used in the form of electricity.

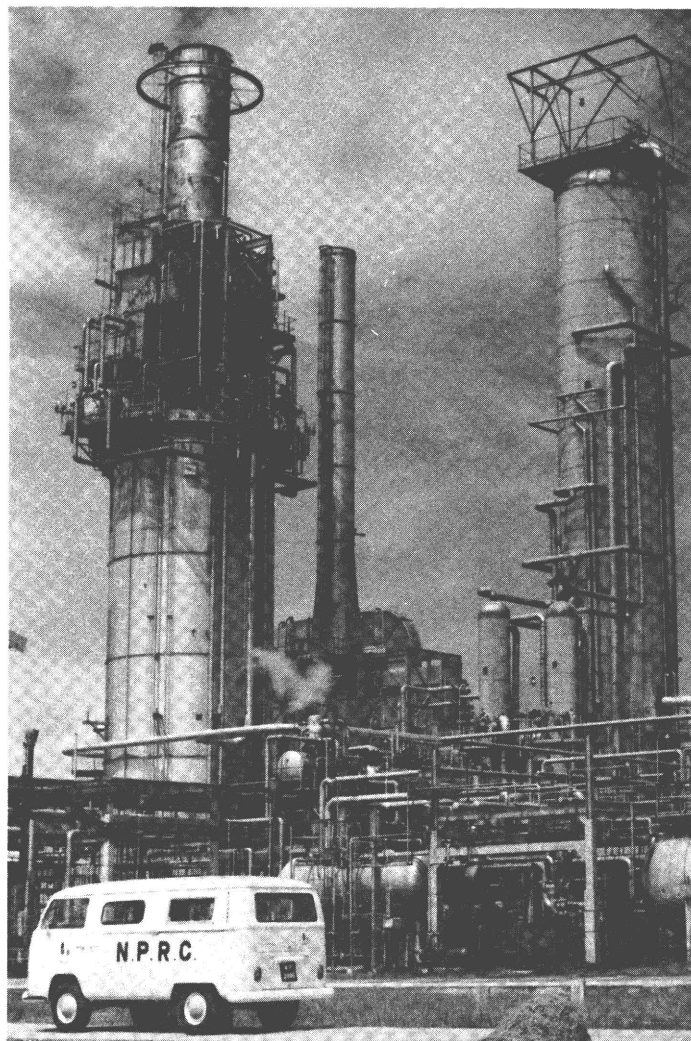
For this to be economically viable requires highly-concentrated means of production serving densely populated areas. Costly investments are needed for the transmission of electricity.

And burning fossil fuels to provide electricity is wasteful: nearly two-thirds of a power station's output is dissipated, and usually lost, in the form of heat. Large-scale electricity production is therefore not the answer for the rural areas of developing countries, where small, scattered communities require relatively small quantities of energy.

Oil offers incomparable advantages compared with other energy sources. It can be refined into products suited to a wide variety of uses — for heating, transport, etc. A particular advantage is the ease with which it can be brought to the consumer; unlike coal, gas or electricity, which require a ponderous distribution system, petroleum products need no more than a can. Mules carry fuel for farm machinery in this way every day in the developing countries.

OIL

The industrial countries consume over 80 % of the world's oil production and the developing countries have about 75 % of the reserves. Estimates of world oil resources are



Oil refinery in Nigeria

uncertain and depend on the technology used as well as the cost of prospection and extraction. Present technology normally only extracts 30-40 % of the oil from an oilfield. As prices rise it becomes economically viable to drill for previously unexploited resources.

The 13 OPEC members (including Nigeria and Gabon) have about 54 % of world production and 70 % of the proved reserves.

Nigeria supplies some 3 % of world production, and has the advantage of low-sulphur, less polluting oil. Only Trinidad and Tobago, Cameroon, Zaire and the Congo really have any oil reserves among the non-OPEC ACP countries.

Oil is easily transported and can be refined into forms suitable for many different uses. As it is non-renewable, its use in the industrialized countries will be concentrated increasingly on those areas in which it is practically without substitutes: transport, raw material for the petrochemical industry.

But throughout the world, oil will continue to play an important part in industry, heating and producing electricity.

COAL

More than 80% of the world's coal is produced in the developed countries, which have 73% of the reserves. Asia (mainly China) has nearly all the rest. The ACP countries (principally Swaziland, also Zaire, Botswana, Zambia, Malawi and Tanzania) have less than 1% of known recoverable world reserves. More than 80% of African coal is produced by South Africa and Rhodesia.

The oil price rises have given a new lease of life to coal mining. The Chinese case is particularly interesting — 80% of China's energy comes from coal, but much of it is mined on a small scale with labour-intensive methods which would be hopelessly expensive in the West.

A promising use for coal is to make gas from it, which could help many countries towards a certain degree of self-sufficiency in energy.

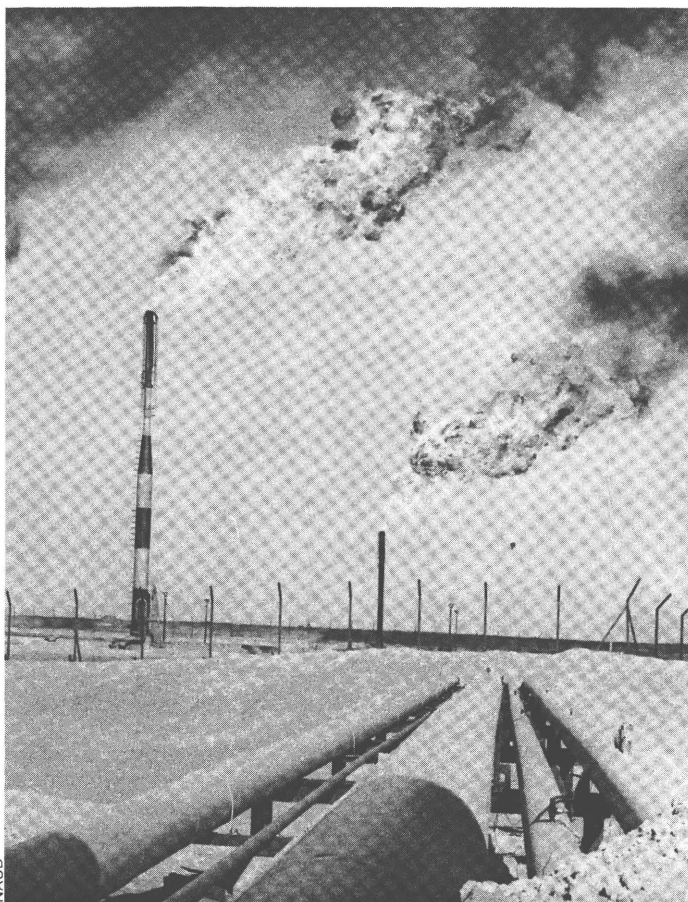
Coal is used not only as a fuel but also in the steel and chemical industries. Its lower grades, peat and lignite, are useful soil conditioners in desert countries.

Underground mining still involves high risks of accidents and lung disease and burning coal causes air pollution.



Coal mining in Chile

Damping the dust has not saved this miner from lung disease



Natural gas flare-off on an Algerian oilfield

NATURAL GAS

In terms of energy content, proved world gas reserves equal almost half the proved oil reserves. Between 50% and 90% of natural gas can be tapped from a well, far more than for oil. Yet much natural gas is wasted—flared-off or reinjected into oilfields to maintain pressure — because it is difficult to transport.

It requires pipelines, or special refrigerated tankers to carry it as a liquid.

In both cases, the investment is only worthwhile for densely populated areas, and distribution requires a heavy infrastructure of pipelines.

World reserves of natural gas are even less well-known than for oil; they are mainly in the Middle East, the USSR and the USA. Reserves do not reflect production: OPEC has 41% of gas reserves and 14% of production.

Among the ACP countries, only Nigeria (1% of world production) and Trinidad and Tobago (0.3%) are significantly involved.

Natural gas usually has to be cleaned or separated out from other gases before use, but it is one of the least polluting sources of energy.

Care has to be taken in handling it because of the risk of explosion.

OTHER HYDROCARBONS

Some forms of hydrocarbons are found soaked into rock or sand. They include natural gas liquids, heavy oils, oil sands, tar sands, asphalt and oil shale. Known reserves are much higher than for oil and natural gas, and a third of them are in developing countries.

But the technology for extracting them is still little-developed and very expensive, and, except for natural gas liquids, production is very low.

Natural gas liquids have the greatest potential. The USA provides 78 % of present production.

Only 9 % of known reserves are in developing countries (mainly Venezuela and Mexico).

Oil and tar sands and oil shale occur on a wider scale, and Zaire, Madagascar and Trinidad and Tobago are ACP countries with significant reserves.

Extracting these hydrocarbons raises problems not only in the technology and cost involved but environmentally.

Openpit mining leaves quantities of waste material which is difficult to destroy without releasing even more pollution than with coal and oil.

NUCLEAR POWER

More than 20 countries now have nuclear reactors and another dozen are preparing for them, including several more advanced developing countries. These fission reactors are fuelled by uranium.

Two ACP countries, Niger and Gabon, produce practically all the uranium ore from the developing world (excluding China), and the Central African Empire, Ethiopia and Zaire have reserves.

But uranium itself is not enough to fuel a reactor. It has to be processed.

The present generation of reactors use about 1 % of the energy in uranium. "Breeder" reactors use about 60 % and would therefore stretch resources much further.

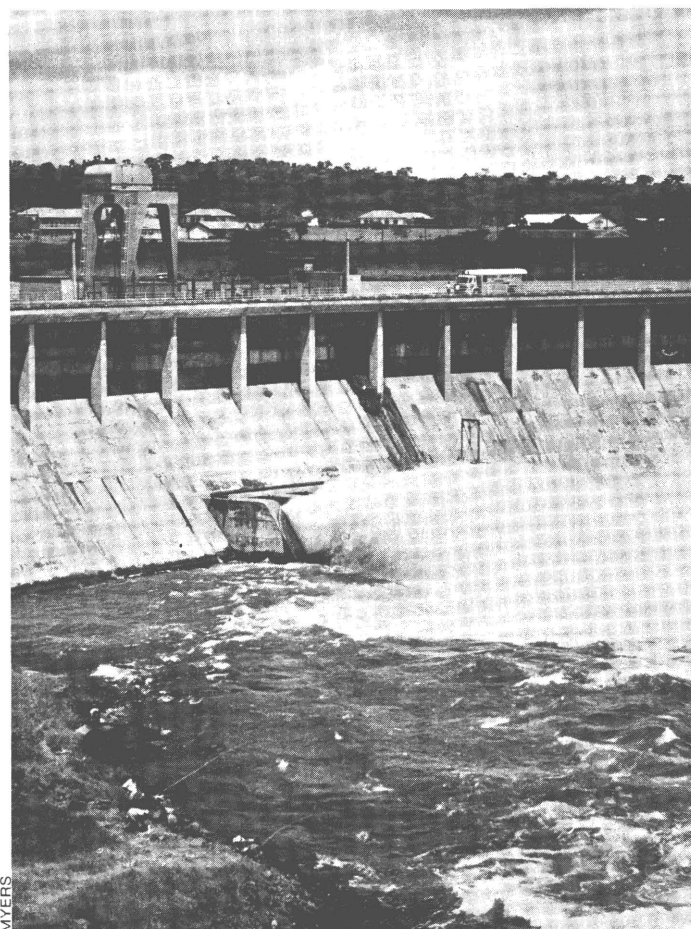
But they involve technical problems which have still not been solved.

Looking ahead, fusion reactors, producing heat in much the same way as the sun, theoretically offer a limitless supply of cheap nuclear energy. They are unlikely to become a reality before well into the next century.

The biggest fusion project is the EEC's JET scheme, now going ahead in England.

Nuclear power raises the spectre of proliferating nuclear weapons capacity, and fears of radio-active pollution.

It requires a high capital outlay, considerable technical back-up and highly-skilled workers.



Hydropower from Owen Falls, Uganda

HYDRO-ELECTRICITY

The developing countries have two thirds of the world's hydro-electric potential. Africa is the leading continent with 26 % of world resources. Zaire alone has 14 % (Cameroon 3 %, Madagascar 2 %). Yet Africa (excluding South Africa) only produces 3 % of world hydro-electricity.

With hydro-electric dams such as Aswan (Egypt), Cabora Bassa (Mozambique), Kariba (Zambia-Rhodesia), Kainji (Nigeria) and Inga (Zaire), Africa has already harnessed this power source through some immense feats of engineering. But herein lies the disadvantage of conventional hydropower — it is too large-scale for many developing countries.

Dam sites are usually remote from population centres and require expensive transmission grids, the capital costs are huge and the establishment of energy-intensive industries to use the power locally may not represent the most balanced use of scarce funds.

Hydro-electric dams are usually coupled with water management schemes—irrigation, fisheries, etc.—aimed at further socio-economic benefits.

Small-scale hydropower, one of the earliest forms of technology offers great possibilities for wider use. Small turbines can generate 5-100 kW from a water head of 3-6 metres, sufficient for use by peasant farmers or craftsmen.

The non-conventional energies

The energy sources in this second, "non-conventional" group include both old and new, both long-perfected and purely theoretical techniques. Their common characteristics are that they are renewable, available in most parts of the world, much less concentrated than conventional energy sources and less mobile in that they tap the living forces of nature in situ: the sun, the wind, gravity, the heat of the Earth and the movement of the sea.

Their main disadvantage is that they are too low-grade to provide electricity for heavy consumers such as modern industry or big towns. However, these "soft" energy sources can be used on a small, decentralized level, and may therefore be very useful in the developing countries.

Wind, water and wood have provided energy for mankind since time immemorial. Modern research is aimed at allowing more use to be made of them, within the limits of an acceptable price. Solar energy, which offers uses as varied as both heating (direct application) and refrigeration (after its transformation into electricity) is undergoing considerable research in the industrialized and in the developing countries. For the latter, many of which have intense sunshine for most of the year, solar power seems the most promising of the new non-conventional forms of energy.

This, then, is the "soft" option — renewable, decentralized, low-grade energy. For the most part, these sources of energy would have the greatest effect in rural communities where power is still mainly provided by human and animal labour. In more developed areas, the present dependence on conventional energy — predominantly coal, oil and gas but also the newcomer, nuclear power — will continue for a long time to come. Nonetheless, a process of change has begun, leading away from the conventional, non-renewable fuels to renewable sources of energy.

GEOTHERMAL

The temperature of the Earth's core is about 4000°C. In some parts of the world (mostly volcanic) this natural heat comes near the surface.

Most geothermal heat is too dispersed for industrial use, but some sites offer a sufficiently intense source of heat for drilling, to a depth of some thousands of metres, to be economically viable. The best sites provide steam, often mixed with water, at 200-300° C, which is used to generate electricity.

At lower temperatures it is used mainly for central heating. Geothermal energy offers electricity cheaper than coal, oil or nuclear power.

So far it has mainly been used where natural hot water occurs, principally in the United States, Iceland, New Zealand, Japan, the USSR, Italy, Mexico, and El Salvador.

The Romans used it for central heating and their descendants began generating electricity from it in 1904. Among the ACP countries, Ethiopia, Jamaica, Ghana, Malawi, Tanzania and Uganda have geothermal electricity projects.

Tapping the subsurface heat in rock could provide far more geothermal energy, but the technology needs further development.

Geothermal energy has some environmental disadvantages, but problems with gas (carbon dioxide, traces of hydrogen sulphide) can be minimized, as experience in Italy and the USA has shown, and it can be one of the least polluting forms of energy if the used water is pumped back into the underground source or into nearby strata more than 1 000 metres deep.

It will have little effect on the energy picture before the mid-1980s but could become a far from negligible energy source, especially if the technique of pumping water through hot rock proves able to provide cheap enough power for industry.

SEA ENERGY

The movement of the tides and the temperature differences in the sea theoretically offer huge energy resources. In practice, sea energy can only be used in very limited circumstances and engineering problems have hampered the introduction of this technique.

The world's only big tidal power generator at present is in France (La Rance). A 240 MW plant is now operating with 18 % efficiency on a tidal rise-and-fall of 8.4 m. Large tidal ranges are necessary.

Temperature differences between deep and surface water, although relatively slight, can be used to condense volatile fluids and generate electricity.

The first practical plant, with a capacity of 22 kW, was built in 1829 off Cuba, and the US has investigated floating or seated power plants with capacities up to 400 MW.

Among the ACP countries, the Ivory Coast has already extracted energy from the heat in seawater.

Raising deeper, cooler water often bring nutrients to the surface, offering possibilities for fish-farming.

Thermal energy could also be used to desalinate seawater.

Rivers can power small turbines, without requiring the large investments necessary for hydro-electric dams.

SOLAR POWER

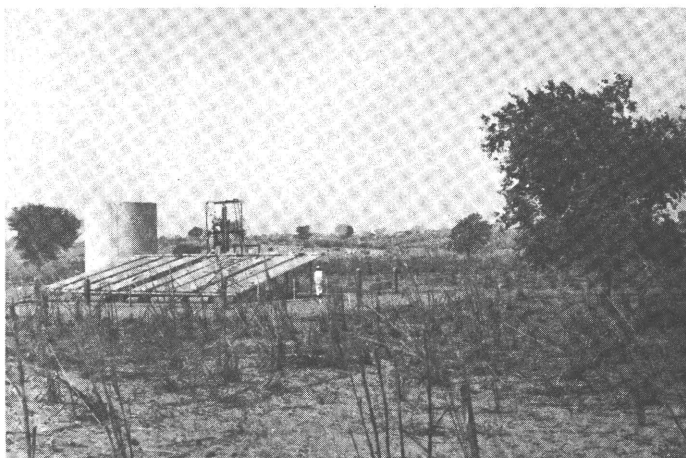
Since practically all our sources of energy were or are indirectly created by sunshine, it seems sensible to use this primary source directly. Most sunshine falls between the tropics, where most of humanity lives.

The flaw in this convenient arrangement is the problem of concentrating, collecting and storing sunshine. The simplest way is to collect its heat, usually by reflecting and focussing it, and using the heat directly (cooking, drying, distilling water, etc.) or to drive an engine producing mechanical power or electricity. Another way is to collect the light. Photovoltaic cells convert sunlight directly into electricity. The problem here has been one of cost, but continuing research into this relatively recent technique is bringing competitiveness closer.

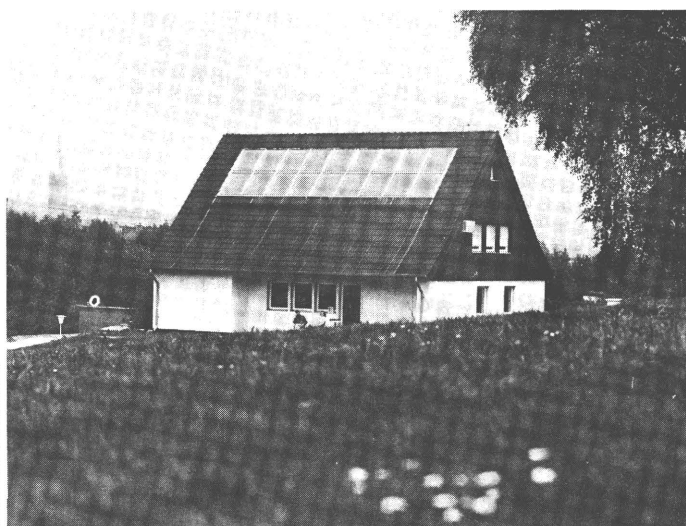
Solar power is already widely used on a small scale in the developing world. Niger, Mali, Senegal, Upper Volta, Nigeria and Trinidad have been quick off the mark among the ACP countries. Simple solar water pumps have proved themselves in areas such as the Sahel.

Research is continuing into high-temperature, high-output solar power stations but this complex technology is of less interest to the developing countries than low-power devices that can effectively decentralize energy supply to the level of the village or even the family. Solar energy is still difficult to store economically but solar engines seem much more reliable than competitors such as the diesel generator.

Outside the large cities, sun power seems to offer a promising solution to some of the Third World's energy needs.



Sun power for rich and poor



A solar pump in Niger and a solar house in Federal Germany



Wind pumps water in the Sudan

WIND POWER

Windmills are a familiar and ancient invention. In many arid parts of the world they alone make survival possible. They can be of a dozen basic kinds, but so far they have been best suited to producing mechanical energy — for pumping, crushing, etc. — rather than generating electricity, although there are big windmills in operation producing hundreds of kilowatts. The small ones are simple to make and maintain.

Their main disadvantages are that they need a steady wind, obviously, and that their energy is difficult to store in calm periods. It would take a lot of windmills to equal the output of a conventional power station, but they offer a cheap, decentralized energy source. A small (1 kW) windmill can lift as much water as five people.

Another way of catching the wind is to use the movement of waves. Various experimental devices are being tested, involving floating generators producing little power separately but offering considerable possibilities collectively over a wide area of water. Wave power is still at an experimental stage.

The one wind-power idea that might offer power station output without a mass of hardware is to set up artificial tornadoes.

The theory is that a funnel-shaped tower would accelerate warm, ground-level air upwards, creating a tremendous draught which could drive turbines.

Wind power is called "aeolian" energy.

BIOGAS

The dung from one cow per day can produce gas equivalent in energy to a pint of petrol. This is biogas, mostly containing methane. Biogas can be produced from animal, plant and human wastes, leaving a slurry that makes excellent fertilizer.

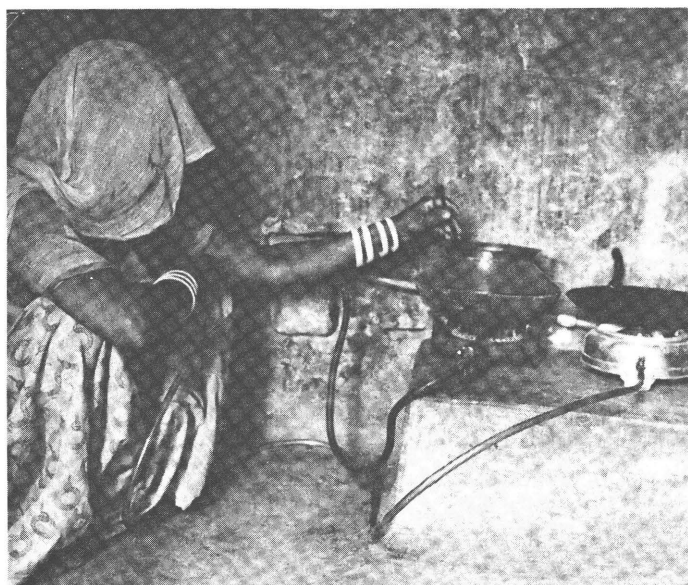
The wastes require an airtight container and a warm temperature (about 35°C) to produce the best results.

The gas contains about two-thirds as much heat as natural (oilfield) gas — quite sufficient for heating, lighting, cooking and even light industry.

India has been experimenting with biogas plants for 20 years, not very successfully. These have been family units, and the problem of the irregular quantity and quality of waste from a single household, plus the cost of the hardware, have proved major difficulties.

On a communal, village scale biogas should offer more effective economies, at least in theory. The difficulties are more social than technical.

Biogas fertilizer slurry, depending on the wastes used, contains nitrogen, phosphate, and potash. It is mostly organic humus, a good soil conditioner.



WHO — A. S. KOCHAR

Cooking by biogas in India: (below) dried cow-dung provides fuel in Turkey, but the soil loses a natural fertilizer



FAO — A. DEFEVER

Burning the biomass while looking for oil in the Niger delta



BIOMASS

Plants are a kind of solar energy store. They release their energy on being burned, either directly or after chemical processing into such fuels as ethanol.

The obvious example is wood, the traditional but increasingly scarce source of fuel in many parts of the Third World.

Vegetation could be cultivated expressly for fuel and much better use could be made of vegetation used only incidentally in this way. Fire-wood plantations might provide the most immediately acceptable answer to most people's needs, as well as helping to reverse the desertification process due to the constant scouring of the land for fuel.

Such "fuel forests" can be integrated with food crops.

Another approach is to ferment plants into fuel in liquid or gas forms. Waste from food plants often has a high energy content and the process of distilling it could be adapted to village-level techniques.

Brazil and India have opted for this on a large scale. "Green petrol" may be mixed with ordinary fuel for vehicles: although it is still relatively expensive the plant-powered tractor may soon be familiar.

The most effective saving in fuel might be obtained from better stoves. Simple design improvements, such as sinking the cooking pot partly into the stove, make much better use of firewood, most of which is burnt very wastefully.

Biomass energy on a large scale might compete with agriculture and raise land ownership questions. □ B.T.

Basic energy requirements in the Third World

by Robert GIRY(*)

The parallel growth of world population and energy consumption over the last 20 years has led a number of economists to see a close correlation between the two. Some have gone so far as to say that the anticipated 60% increase in the world population between now and the end of the century will almost inevitably lead to an increase of about 100% in energy consumption.

This approach ignores a fundamental fact about the modern economy, namely that the major part of world resources is used by the rich countries where energy is still systematically wasted. Of the 8 000 million t of coal equivalent consumed in the world (1974 calculations), the US absorbed 2 520 million, the USSR 1 350 million, the EEC 1 310 million, Japan 340 million, the rest of Europe 320 million and Canada 260 million.

Less than a quarter of the world's population thus consumed more than three-quarters of total energy resources. And if the analysis is taken further, it emerges that most of the remaining quarter is wasted by the well-off in the other countries.

So it may be useful to try to calculate the real increase in energy consumption that would be required to meet the needs of everyone on the planet.

Since population increase is mainly confined to the tropics, the essential energy needs to be covered are food, cooking, clothing, housing and transport.

Basic food requirements

Food varies with climate and cultural tradition from one country to another. The staple foods in the tropics are rice, maize, sorghum, various roots such as, manioc, sweet potatoes and yams, and beans and plantains. Now that civilizations intermingle, a certain diversity is appearing in each country and this has a beneficial effect in that diets are more balanced and harvests can be spread over the year. It also means that some crops can compensate for bad harvests of others, as not all crops have bad years together. However, it tends not to make much difference to the volume of resources.

The following remarks concern grain production but are also applicable to beans, roots and plantains.

Most arable land in the Third World is already under cultivation. One or two countries still have land that can be cleared while others have stretches that ought never to have been used and are now undergoing a swift process of desertification.

A first rough estimate suggests that there will be little variation in the total area of arable land and that the extra agricultural production required to feed the new inhabitants of the planet will have to come from the increased productivity of existing farmland.

This still leaves a lot of room for production increases, since average yields at the moment are very low. In south-east Asia, the average yield of paddy rice is about 0.8-1 ton

(*) Ex-pupil of the Ecole Polytechnique in Paris, he is the author of the *Atlas industriel de la France* (1959) and just brought out a book on nuclear energy, *Le nucléaire inutile?* (Entente editions, 12, rue Honoré Chevalier, 75006, Paris).

Rates of equivalence

One of the characteristics of energy is the diversity of its forms, ranging from coal to the wind and the sun.

It is only possible to compare, add or subtract quantities of the same kind. Any study of energy use must therefore choose the rates of equivalence between the units used to measure the different forms of energy.

As, for some time, the main form of primary energy used in western Europe was coal, the tonne of coal equivalent is the usual unit of measurement. Later on, in the belief that oil had replaced coal for good and all, some statisticians opted for the tonne of oil equivalent.

But the various forms of primary energy are not all equally suitable for different purposes and so the equivalence rates vary considerably, according to use on the basis of which they are calculated.

However, as well as having specific uses, all the forms of energy are used to produce electricity. This is therefore the basis for the rates of equivalence.

One tonne of coal equivalent of a given form of energy is the quantity it takes to produce the same amount of electricity as one tonne of coal.

The equivalence rates for electric energy therefore have a special meaning, i.e. the quantity of coal or petroleum products it takes to produce 1 MWh, but not the opposite.

Subject to these reservations, then:

| | | | | | |
|---------------------------|---|-------|----------|-------|--------|
| 1 t coal | = | 0.7 | t o.e. = | 1.43 | t c.e. |
| 1 t coal bricks | = | 0.7 | t o.e. = | 1.43 | t c.e. |
| 1 t petroleum products | = | 1 | t o.e. = | 1.43 | t c.e. |
| 1 Mth gas | = | 100 | t o.e. = | 143 | t c.e. |
| 1 Mth fuel | = | 100 | t o.e. = | 143 | t c.e. |
| 1 m ³ petrol | = | 0.8 | t o.e. = | 1.14 | t c.e. |
| 1 m ³ fuel oil | = | 0.86 | t o.e. = | 1.23 | t c.e. |
| 1 MWh gross | = | 0.218 | t o.e. = | 0.312 | t c.e. |
| 1 MWh net | = | 0.230 | t o.e. = | 0.329 | t c.e. |

Note that the equivalence systems vary somewhat from one study to another and that these variations may explain certain minor statistical discrepancies.

per ha, whereas it could be as much as 4 or 5 tons. There is not always much scope for improvement but, generally speaking, it is technically possible to double or treble existing production.

This extra productivity will require improved strains and additions of humus and fertilizer. Mineral fertilizers alone are likely to sterilize the soil, but other improvements give very limited results if no fertilizer at all is used. Fertilizer alone among these improvements requires energy. The others only call for better training and extension services to help the peasant farmer.

About 130 kg of N, P and K fertilizers are needed per extra tonne of grain production, the relative proportions obviously varying according to the soil and the grain to be produced. We shall take 60 kg nitrogen, 50 kg P_2O_5 and 20 kg K_2O as the average requirements in the Third World.

Many agronomists will find the figure for potassium low, since in many cases as much potassium as other components is required. But in the rice fields of south and south-east Asia, the response to potassium is practically nil and 60 kg nitrogen and 60 kg P_2O_5 alone suffice. The importance of south and south-east Asia in the overall world population, now and in future, means it makes sense to adopt the low proportion of potassium as the world average.

Nitrogen is the component that takes the most energy to produce, 1.66 kg of petroleum products (natural gas or oil) being needed to produce 1 kg of nitrogen contained in urea or ammonium nitrate.

However, phosphates demand little energy. In most soil in the tropics, the chemical solubilization of phosphates is not necessary and may even be harmful. Experience shows that finely powdered natural phosphates are as easily assimilated as solubilized fertilizer as far as the first crop is concerned and that the final yield is much higher, since they are not washed away by tropical rains and continue to have an effect for two or three years.

The indirect consumption of energy involved in the use of powdered natural phosphates only corresponds to what is needed to extract, powder and transport them.

Most countries of Africa and Latin America have substantial natural phosphate resources. Those in Africa are well known. Those a long way from the coast are not economic export propositions in view of the high cost of transport, but they could well be used for national agriculture. Examples of this are Mali, Upper Volta, Niger, the CAE, Kivu (Zaire), Uganda and Tanzania.

Latin America's resources are at least as great as Africa's. There is a chain of deposits not far from the Atlantic coast corresponding to the coastal deposits in Africa (an example of the geological continuity of Africa and Latin America), and another along the eastern foothills of the Andes. However, since the market is dominated by large phosphate groups from Florida, no one bothers to get their supplies from this part of the world, although they will be there when they are wanted.

The problem in Asia and the Pacific is different, as phosphate deposits are rare in this part of the world. The eating away of the island of Nauru is nearly complete, the Paracel Islands quarrel is obviously tied up with the phosphate deposits and some deposits have recently been found in Laos. However, in view of the huge requirements, it is likely that, in future, at least part of this region's phosphate supply will have to come from countries on the south Atlantic seaboard. But, in view of the conditions of mineral

transport and the very summary processing which the product requires, energy consumption per tonne of ground phosphates delivered to the place of destination will remain very low, even for the countries of Asia and the Pacific.

This leaves potassium, currently monopolized by the industrialized countries, the USSR, the EEC, Canada, the US and Israel. Considerable investments are called for but there is no shortage of the relevant mineral resources and the techniques involved are fairly simple. It would therefore be easy for Third World countries to meet their requirements cheaply with the financial help of the oil-producing countries. In any case, only limited quantities of energy are required to produce potassium fertilizer, particularly in countries where evaporation can be taken care of by solar energy.

To sum up, then, to produce the 130 kg of fertilizer needed to obtain an extra tonne of grain, it takes 100 kg of petroleum products for the 60 kg nitrogen, and 50 kg to extract and powder the phosphates, produce the potassium and transport it all.

If an average of 200 kg p.a. of grain is needed for the basic food requirements of one man, the corresponding energy is $150 \text{ kg} \times 0.2 = 30 \text{ kg}$ per person per annum.

Protein

The main deficiency in a tropical diet is the lack of protein, with all its consequences on the physical and intellectual development of the individual. The economic and human development of the countries of the Third World calls for a considerable increase in intake of animal protein, particularly by children and adolescents.

However, the production of high-quality protein in the form of beef or even pork involves so much wastage of vegetable protein that it is obviously out of the question to solve the Third World's food problem in this way. It would be impossible to produce enough vegetable protein.

So the idea now is to use single-cell protein, i.e. yeast, which, when freeze-dried, contains about 60% of pure and directly assimilable protein.

Yeast can be cultivated on a variety of bases, which may be of agricultural origin (sugar and molasses for example) or petroleum products. Both have similar properties and both can be used for human food, provided the limits are respected (30-40 gr per day, i.e. 20-25 gr of pure protein, corresponding to 100-120 gr of steak). Beyond this point, the nucleoproteins which human beings do not assimilate would be difficult to eliminate.

The energy equivalent of these yeasts can be calculated on the basis of the petroleum products consumed in the production of those cultivated on diesel oil, etc. This makes 1.6 kg of petroleum products to feed the yeast and 1.6 kg oil equivalent for energy to run the factory, i.e. 3.2 kg oil equivalent per kg of protein. Taking an animal protein requirement of 20 gr per day (7.2 kg p.a.), consumption will be 25 kg oil equivalent per person p.a.

Cooking

Cooking is often overlooked as it is never mentioned in the statistics, in spite of the fact that it is the largest consumer of energy in subsistence economies. In most countries, people cook over fires of wood or various wastes



At home in Gabon: little energy is required to meet the basic needs

in the rural areas and charcoal in the towns. A number of studies have put average consumption at 0.25 m³(1) per person p.a. in the country and 1 m³ in the town.

The difference can be explained by the fact that half the fuel in the country is odd waste (such as dried grass) and not cut wood properly speaking and that, in the towns, half the calorific value of the wood has already been lost in the charcoal production process.

Thus the real fuel consumption in cooking can be assessed at the theoretical equivalent of half a cubic metre of dry wood per person p.a., or 1 000 th p.a. = 100 kg oil equivalent.

Clothing and housing

Clothing in the tropics takes between 0.5 and 1 kg of cotton p.a. and shoes about 0.5 kg of rubber or plastic. Taking account of the energy required in manufacturing, these needs can be estimated at 2 kg oil equivalent p.a.

Houses are made of wood or clay with very little lime or cement and are roofed with local materials, corrugated iron or aluminium. The total energy equivalent is difficult to calculate, but let us assume an average of 5 kg oil equivalent for a house inhabited by five people for 20 years, which does not seem unreasonable.

For cooking utensils we assume 1 kg oil equivalent per person per year = 5 kg oil equivalent p.a. for a family of five.

Transport

People mainly travel by public transport in the Third World and the vehicles, which are always very full, consume between 1 and 1.5 kg oil equivalent per 100 km. Small motorcycles consume about 2 kg oil equivalent per 100 km.

It would seem reasonable at this stage to plan for 5 kg oil equivalent per person per year, corresponding to 250-300

km per person p.a. (for both sexes and across the whole age range).

Goods traffic consumes more. We have not taken these requirements into account since they belong to the commercial and not the subsistence economy and consumption must be set off against the cost in energy of the products exported.

o o o

We thus arrive at a figure of 165 kg oil equivalent for the energy needed to cover the basic requirements of each inhabitant of the planet. For 3 000 million people, the figure is 500 million tonnes oil equivalent (700 million t coal equivalent).

As things stand, the 3 000 million poorest people account for only a small percentage of world energy consumption as outlined in the statistics.

That part of their needs covered by deforestation and the exhaustion of soil nutrients does not appear in the energy consumption statistics and another part is not covered at all.

In future, of course, a fraction of their needs will still be supplied by local agricultural resources which will not figure in international statistics either. But the calculation above shows that a minimal percentage of world resources would easily satisfy both the basic needs of the poorest 3 000 million and of the 2-3 000 million more people we are expecting between now and the year 2000.

The problem of the energy shortage is therefore principally one of senseless wastage by the rich countries and the privileged classes in the poor ones. It has nothing to do with the problem of hunger in the world.

The vicious circle of malnutrition-low productivity-inadequate production trapping the Third World can only be broken at village level by hard work on the part of those concerned, with instruction and especially with the help of extension workers. The massive nuclear energy programmes being planned here and there seem unlikely to provide a solution on their own. □

R.G.

(1) One cubic metre of firewood is estimated on average to weigh 525 kg: at 3.8 therms per kg = 2 kth per m³.

The 10th world energy conference

by Maurice ALLION(*)

The general theme of the Tenth World Energy Conference, held in Istanbul from 19-23 September 1977, was: "The availability and rational use of energy resources".

The 3500 participants at this meeting came from all the countries of the world, with the exception of those, like Greece, which declined to attend for political reasons. There was a relatively large contingent (some 1100 people) from the countries of the Community and the EEC Commission sent its own team.

Four major aspects of the problem were discussed in detail:

- i) the development of conventional sources of energy;
- ii) energy conservation;
- iii) the transformation of primary energy;
- iv) non-conventional sources of energy.

Seven round tables and a number of special sessions were run alongside the general programme of the conference.

Most of them were on subjects closely connected with the various energy sources; availability and conservation of energy, on long-term prospects and on planning energy supply and demand.

Particular attention was paid to:

- the Turkish energy model;
- hydraulic resources;
- an exchange of information on energy;
- energy conservation and demand;
- the limits of energy saving;
- oil and gas reserves;
- a strategy for alternative energy sources;
- heat and electricity production from waste;
- control of the use of plutonium;
- coking coal;
- nuclear-powered vessels;
- international cooperation in the energy sector;
- economic aspects of super-conducting cables;

- combined heat-power production;
- coal resources;
- availability of thermal power stations;
- nuclear and non-conventional energy.

There was much discussion of the Turkish computerized energy system which combines central, state-run planning of production and supply with a liberal system of utilization.

Disagreement on projected Third World energy consumption

The report on the world demand for energy until the year 2020 provoked a good deal of interest, although there was considerable criticism from a certain number of delegates from the developing countries, who felt that the estimated energy consumption of the Third World was too small. In the various scenarios, the OECD, the countries with centrally-planned economies and the developing countries take roughly a third each of world energy, whereas their populations will be respectively 11 %, 24 % and 65 % of the total. Several speakers put the developing countries' demand for energy in the year 2020 at 50 % above the estimates in the report under discussion.

Other researchers (from France) said they were convinced that there would be a sustained growth in energy consumption at world level, due to the ineluctable development of the Third World.

Emphasis was laid on the fact that there is no point in expecting a major contribution from the developing countries as regards the conservation and rational use of energy, although modest results might be obtained if there were a large-scale transfer of the relevant technology to the Third World.

The EEC Commission submitted a report on the Community's programmes on the rational use of energy and research into energy saving. This was a far-reaching study of the possible substitution of primary sources in the Member States of the Community and of technical improvements to existing processes, with the aim of reducing oil consumption (58.4 % of total energy consumption in the Community).

A clearer idea of the problems

The Conference was thus an opportunity for top-level discussion of the world's energy problems with a view to ensuring a balance between the supply of and demand for all types of energy in the longer term.

The intention was not to find immediate solutions, but to obtain a clearer idea of the energy problems facing society as a whole, in both industrialized and developing countries regardless of whether they have their own energy resources or depend on supplies from elsewhere.

The one or two scenarios on demand beyond the year 2000 show the sensitivity resulting from a choice of economic hypotheses which are very close but give cumulative effects over 40 or 50 years leading to very different estimates. □

M.A.

(*) Head of the energy-saving division in the directorate-general for energy, Commission of the European Communities.

How solar energy can help the developing countries

by Wolfgang PALZ

Solar energy is normally taken to include both the direct conversion of sunshine into useful power and the conversion of its indirect forms, the products of photosynthesis and wind power.

It took a long time before solar energy was taken seriously, but for a few years now it has been one of the most promising of the non-conventional forms of energy.

This awakening of interest is particularly apparent in the increase in research, the budget for the American programme, for example, now being 300 times greater than it was only seven years back.

The Commission of the European Communities was quick to introduce a solar R & D programme in the Community and, since 1975, its research, education and science department (director-general 12) has set up a programme covering a range of solar conversion processes. The main ones are:

- solar heating and air conditioning (test procedure for collectors, heat storage systems, solar housing, refrigeration by absorption, etc.);
- electric power stations based on focussing mirrors (vertical construction);
- photovoltaic generators based on the sort of solar batteries used in satellites;
- rational use of biomass (energy from straw, wood chips and other agricultural and animal waste; waste transformation by gasification/fermentation; cultivation of algae and tree planting);
- collection of meteorological data.

Since the sun shines around the world, any solar products or apparatus resulting from research will be potentially useful in all, not just one region.

The hot countries, by virtue of their favourable climate, may be the first to benefit from new apparatus providing free and abundant energy such as the sun yields.

Since solar energy is everywhere and can be collected by small, independent units, it opens new horizons for development, even for rural development in poor and landlocked areas. It is of particular interest to arid countries where supplies of the traditional fuel, wood, are beginning to run

out and have to be protected to avoid other ecological disasters and where, in addition, small diesel-powered units have proved unsuitable.

The problem of rural development, the equipping of villages that are isolated or at least difficult to get to along the existing tracks, closely affects research into a source of energy suited to such local conditions. In many countries, progress has still to come to villages such as these and the energy problem is also a sociological one.

There are vast regions where the sun is the only source of energy. It must now be put to the best use, by using local skills and materials to produce modern technology developed either locally or in cooperation with the industrialized countries' laboratories.

These dazzling prospects of the rapid introduction of solar energy to the poor regions of the world are, unfortunately, in complete contrast with the realities of the present situation and the progress made so far. All in all, only a few one-off experiments have been run, involving a few dozen solar-powered water pumps, a few thousand water heaters and one or two solar distillation units and grain dryers.

And windmills are still a rarity in areas where conditions are right for them. The most successful marginal use of solar energy so far is the locally-made biogas generator.

This provisional summary is no cause for surprise in view of how little effort was put into solar energy until very recently. The first pump operated by solar batteries, was only installed in 1975.

So a promising new technology is really only beginning. Everything must be done to ensure that solar energy lives up to expectations.

Solar energy can be used to power the following:

- electric generators for lighting, telecommunications, machinery, refrigeration, etc.
- water pumps for village supplies, livestock and irrigation;
- the distillation of salt water in regions where there is no subsurface water suitable for drinking;
- various types of heating—drying agricultural products, meat and fish; solar ovens, cookers, water heaters, etc.

And agricultural waste such as rice straw, can be burnt directly or transformed into other fuels.

The financial problems which might prevent large-scale use of solar apparatus can be overcome by bringing existing aid procedures into play wherever possible. In certain cases, it will be necessary to develop procedures adapted to the new industrial, sociological and financial problems which solar energy poses.

Solar energy calls for a special cooperation effort so that regions that are poor today can have a greater share in modern material and social progress. □ W.P.

Energy, environment and development

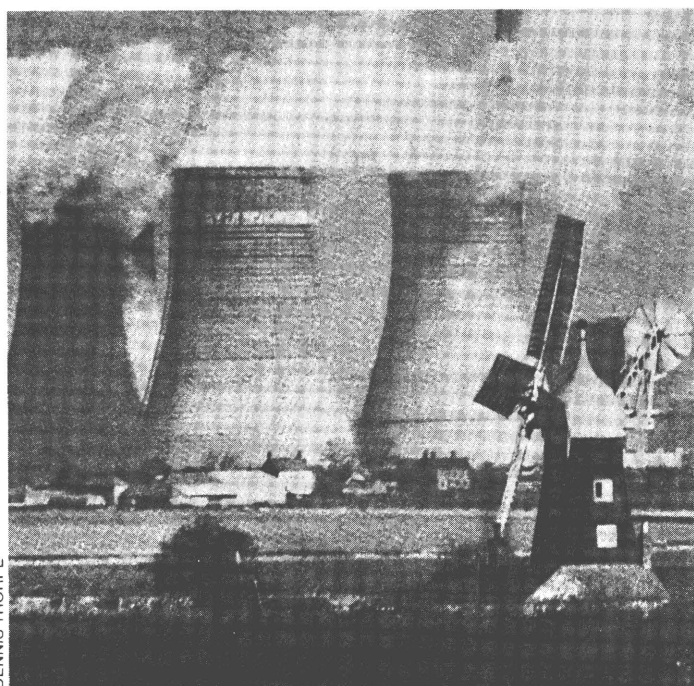
by Essam EL-HINNAWI(*)

One of the greatest challenges facing the international community today is to design development so that it satisfies human needs, and is environmentally realistic and appropriate.

It is true that industrial and agricultural development — largely through mismanagement by man of natural resources — has given rise to numerous environmental problems such as pollution of water, soil and air with consequent adverse effects on human health and well-being. Some of these problems are of more than local significance and, by themselves or through their interactions with other factors, have become matters of regional or international concern. But environmental problems are caused also by underdevelopment. The pressures that arise when basic human needs are not met, and when man endeavours to satisfy those needs by any available means, can destroy the resource base on which man depends for his sustenance. Nationally and internationally, it is, therefore, important to foster styles of development more capable of meeting the "inner limits" of basic human needs of all the world's people without violating the "outer limits" of the planet's resources and environment.

(*) Chairman, Energy Task Force, United Nations Environment Programme.

A power station overshadows the landscape while a windmill provides a reminder that there are clean energy sources



DENNIS THORPE

Energy has long been viewed as an essential ingredient to meet our basic needs and to stimulate and support economic growth and our standard of living, so much so that often a nation identifies its well-being with its gargantuan and growing need for energy.

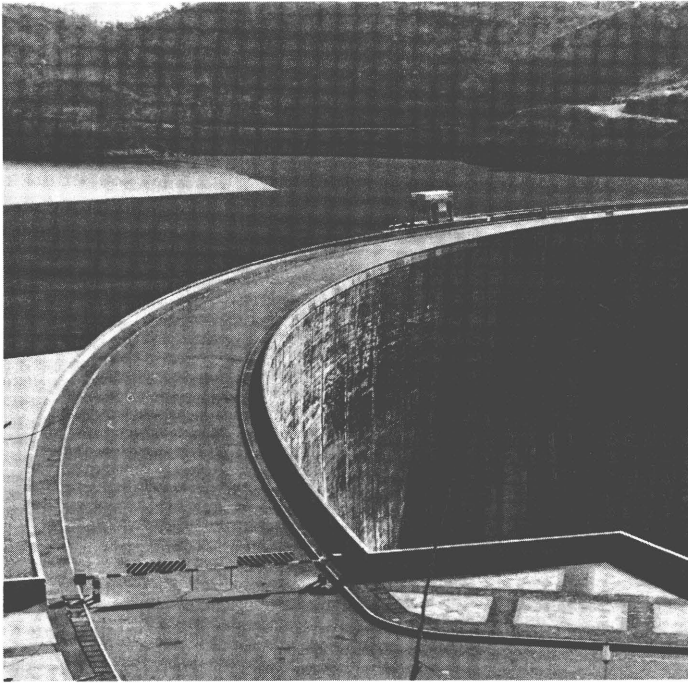
For the greater part of the last century the rising global demand for energy has been met to an increasing extent by the use of fossil fuels. This trend was encouraged by the comparatively low price of oil, which in many instances has not been used in the most efficient manner. With the ever-rising demand for fossil fuels there has been an accompanying realization that these energy resources are finite in extent and should therefore be regarded as wasting assets.

The general realization of the finite nature of fossil fuel resources has caused a re-examination of the possibility of using those energy resources which are of a non-depleting nature and, therefore, considered renewable. These energy sources are increasingly important both in developed and in developing countries. In the former countries, strategies for the exploitation of such sources constitute a part of recent conservation policies which aim at reducing the dependence on fossil fuels to satisfy the growing needs for energy. In the developing countries, particularly those short of fossil fuel resources, the renewable sources of energy constitute a promise for meeting a part of the future energy needs, at a reasonable price, to accelerate the process of development, particularly in rural areas.

The United Nations Environment Programme has, since its establishment in 1972, been involved in energy studies. The general policies of UNEP in this area consists of: — study of the energy/environment relationship; — feasibility of harnessing renewable sources of energy to improve the human environment, with particular reference to developing countries; — energy conservation and its environmental impacts.

To implement the first element of this policy, the Energy Task Force of UNEP is undertaking a series of comprehensive studies on the environmental impacts of production, transportation, processing and use of all sources of energy. The first of these studies has been devoted to fossil fuels (coal, oil and gas, tar sands, oil shales) and has been reviewed by an international panel of experts convened in Warsaw from 17 to 21 April, 1978. The second study deals with the environmental impacts of nuclear energy and will be reviewed by another panel to be convened, in cooperation with IAEA, in Geneva from 20 to 24 November, 1978. A third study on renewable sources of energy (solar, tidal, wind, geothermal, hydropower, etc.) will be examined in March, 1979. In their review of these studies, the panels of experts will make an attempt to identify a priority list(s) of the emerging issues that require accelerated research and development efforts. Extensive research programmes are being carried out by various international, regional and national institutions, and the aim of pin-pointing such emerging issues is to accelerate these efforts, particularly in developing countries.

After the completion of this series of studies, the Energy Task Force of UNEP is planning to convene an international panel of experts for the comparative assessment of the environmental impacts of all sources of energy. The results



The Kariba dam on the Zambezi: large-scale hydroelectric dams can cause considerable ecological damage

of this assessment will be of major importance in guiding countries, especially developing countries, in the formulation of their energy policies and development plans. This meeting is envisaged for the autumn of 1979.

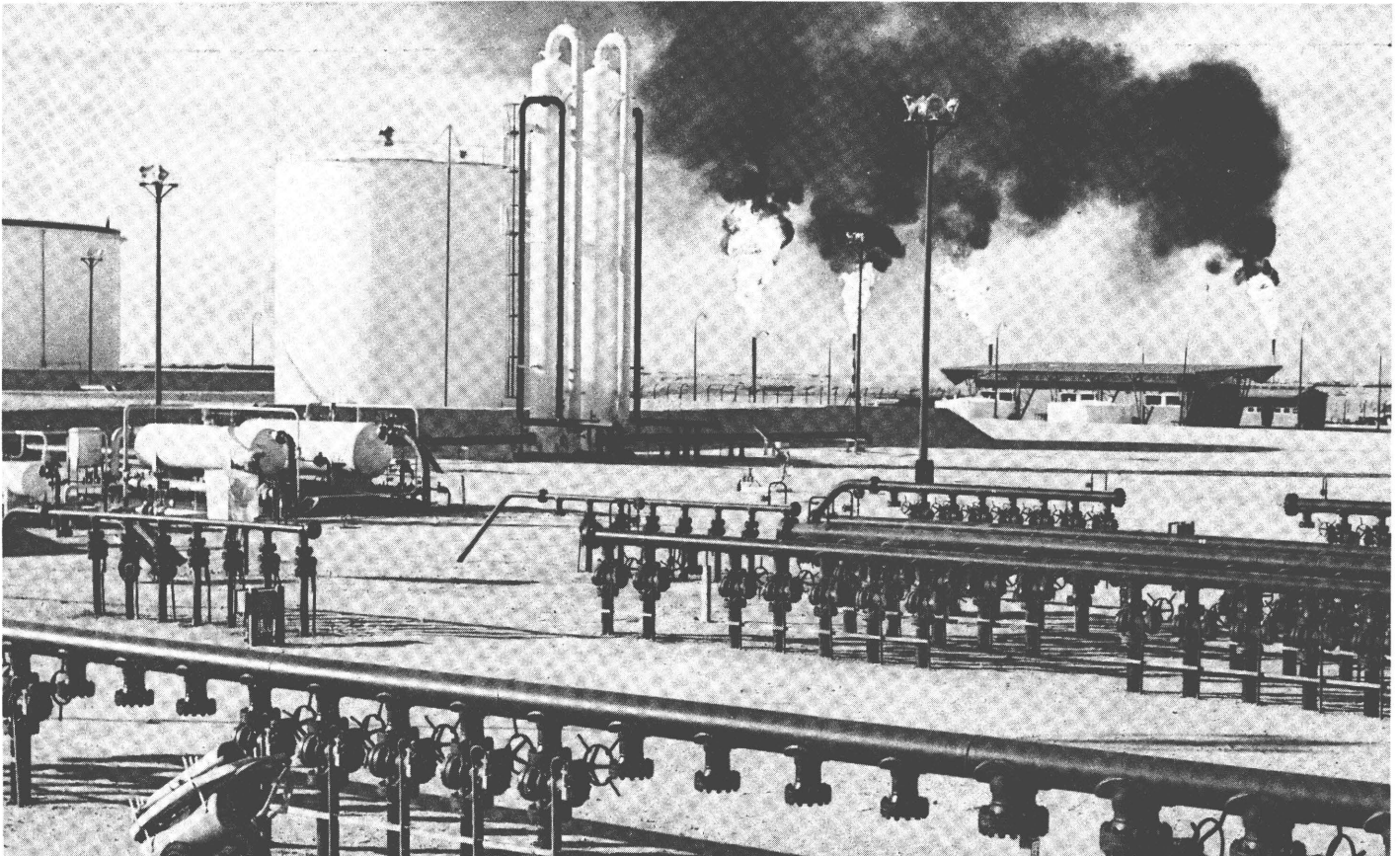
The harnessing of renewable energy sources for the betterment of the human environment in developing coun-

tries constitutes another component of the Energy Programme of UNEP. Two major experiments are being carried out: one in Sri Lanka and one in Senegal, to demonstrate the feasibility of harnessing the locally available renewable sources of energy in two villages, one in each country. The main approach to these experiments is the utilization of solar energy, wind power and biogas generated from organic wastes (mainly cow dung) independently or in an integrated manner to produce electricity to be used for lighting, pumping water and possibly for small-scale rural industries. The results of these experiments will be evaluated economically, socially and environmentally before establishing the feasibility of the system.

The programme of UNEP in the area of renewable sources of energy aims at demonstrating the use of appropriate technologies to develop clean sources of energy that would enhance development and improve the human environment of the poor in rural areas. Excessive woodcutting is among the most serious causes of desertification and if a substitute for woody fuel can be found in these areas, it will be a powerful factor in the improved management of vegetation resources and hence a tool in combatting desertification. The burning of cow dung cakes leads to the loss of valuable nutrients that could be used as fertilizer to enhance agricultural development and if the cow dung is used for biogas production, it will conserve these nutrients which could then be used, in addition to the production of methane gas for cooking and/or other uses.

Energy conservation is another component of UNEP's activities in the area of energy. The principal effort is directed at studying the relationship between energy conservation and environment — the physical and socio-economic. Energy conservation does not mean going without; it means going further with what is available. □ E.E.-H.

Oilfield in Algeria: where there's money there's muck ?



GREVIN

Energy conservation

If the conventional forms of energy have become too expensive and new forms of energy are not ready to replace them, the industrialized countries can at least try to save some of the energy which they have squandered so prodigally up to now. More than half of all the energy produced is wasted, according to the latest report of the UN Environment Programme (1).

In the EEC, for example, the average rate of energy use (final useful production as % of primary energy) is 42%. The figure for other regions varies according to socio-economic conditions and energy utilization techniques.

Since early this year, a number of countries have announced energy-saving measures. In the US, \$ 902 million of the 1979 budget (twice the 1978 amount) has been earmarked for federal programmes aimed at reducing energy consumption. A government economy campaign in the UK should enable 10 million t of diesel oil p.a. to be saved, and a 14% cut made in British industry's expenditure on fuel, by fairly simple heating and insulation control methods.

The same is true of the Netherlands, where household consumption will increase by 3.9% p.a. until 1985 if nothing is done to prevent it, whereas energy-saving measures currently on the board could cut it to 0.8%.

(1) This article is based on extracts from the report, "The State of the Environment 1978", by UNEP executive director Dr Mostafa Tolba.

Better returns

The conservation of energy has been defined as the strategy involving maximum improvement of energy utilization systems and methods so as to cut the energy requirement per unit of production (or well-being) without compromising socio-economic development or radically changing the established way of life.

Essentially, that means getting more work from the fuel consumed. Saving energy does not mean going without, but making what resources we do have last longer. The question: "how much fuel have we got?" should be followed with: "are we making the most of it?"

"We" does not just mean the rich countries. The toothbrushes and lawnmowers and all the rest of the luxury electric gadgetry which these countries could well do without are just the most obvious form of wastage, characteristic of an increasingly contested consumer society. Consumption of energy depends on innumerable decisions taken by an infinite number of energy users, both large and small, rich and poor. And these decisions rest on a multitude of economic factors like income, cost, investment and taxation.

The consumption of energy also depends on energy utilization techniques and how efficient they are, on climate and geography, on social customs and standards, on administrative rulings, on environmental priorities and demands and on the perception of the role energy plays in the life of the individual. The way these factors interact and the repercussions they have vary with each nation and each user.

Luanda, capital of Angola

"Half the energy used for lighting is superfluous"



The main sectors of energy use are housing and trade, transport, industry and agriculture. If the same amount of energy can be made to yield more in these sectors, substantial savings can be made.

Housing

Buildings consume energy in three ways. Energy is required to manufacture the building materials, for the construction, and throughout the life of the building.

The quantity of energy consumed during these three phases varies considerably from country to country, being higher in developed than developing countries. Substantial energy-saving can be made in housing by using the right materials, design and insulation, and efficient heating, air-conditioning, lighting, etc. Half the direct energy currently used for lighting is superfluous and most lighting systems are inefficient.

At the moment, light bulbs only convert one tenth and fluorescent tubes one fifth of the electric energy they consume into light. There is no theoretical reason why a higher degree of energy/light conversion cannot be obtained.

Transport

Energy efficiency in this sector varies considerably. Railways and sea and river transport, for example, are more efficient than air or road transport, the latter being the least efficient of all and accounting for most of the energy consumed in this sector. Huge savings could be made if mechanical techniques were improved and better use made of space in existing systems, if an increasing amount of traffic went by more efficient means and, above all, if transport habits were changed.

Attempts to save energy in transport often have unexpected but useful side effects. For example, the lowering of the speed limit in the US, which was intended to save energy, also lengthened the life of tyres and reduced accidents and deaths on the roads.

Industry

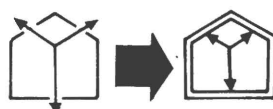
Considerable savings could be made here by introducing technical innovations. The conversion of steam engines to diesel electric motors, the inclusion into existing processes of components making more efficient use of energy, the introduction of operating and maintenance methods geared to conserving energy, the replacement of current machines by more efficient ones, new techniques in industrial processes, multi-purpose use of energy in industry (e.g. to produce electricity and steam), are examples of the many ways in which energy can be used more efficiently in the industrial sector.

And there is no need to cut production to reduce the use of energy in industry. It is a question of pushing up the energy yield of the fuel which industry consumes.

Agriculture

Energy consumption has soared in recent decades due to technical progress aimed at increasing food production. The mechanization of agriculture, the increasing use of fertiliz-

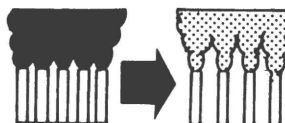
The great energy wasters



Insulation reduces use by 30%



Improved light bulbs would use 60% less electricity



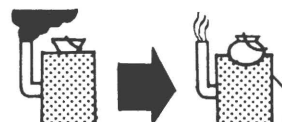
Better industrial methods would allow a 20% reduction in energy use



Using solar and wind power



More efficient transport could bring major savings



Drying wood and improving furnaces would save 50%

Thrown away in the USA each year



26 thousand million glass bottles

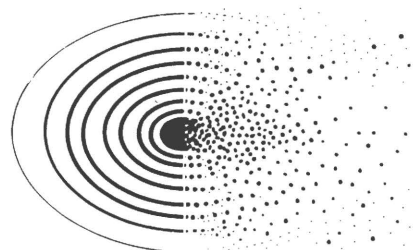


48 thousand million cans



7 million cars

Half of all energy used is wasted.



Drawings by Peter Sullivan of the London Sunday Times for World Environment Day, 5 June 1978

ers and pesticides and pumping for irrigation are important factors here. The "green revolution" involved the systematic use of fertilizer, which used a great deal of energy, to make up for the scarcity of agricultural land. Miracle seeds demand a vast increase in fuel consumption to double or treble food production. At a time when energy was cheap and plentiful, this was a rational idea and the green revolution saved millions of people from famine. But, energy is no longer cheap nor plentiful and it is energy, to an increasing extent, that limits agricultural production. So the agricultural system needs to be reviewed. Renewable sources of energy could well help.

By using wind power to pump irrigation water, solar energy to heat greenhouses and dry grain, low-yield geothermal sources for greenhouses, and so on, fossil fuels could be saved. By introducing on-the-spot bioconversion of animal and agricultural waste, enough fuel could be produced to meet the energy requirements of a number of farms. The highly-nutritive residue obtained as a biomass by-product can be used as fertilizer, thus cutting down on the amount of chemical fertilizer required. These environmentally sound and appropriate methods are used particularly in India, the Philippines and China.

A large percentage of useable energy is now lost. If as much as possible of the potential energy contained in urban, animal, agricultural and forestry waste were extracted, if the millions of tons of scrap metal were recycled, if most food cans were replaced by standard, returnable bottles and if the useless wrappings that are such an encumbrance in the modern world were done away with, vast amounts of energy would be saved.

We cannot list all the possible ways of saving substantial amounts of energy here. Most goods could be manufactured and used more efficiently. Many countries have recently adopted energy-saving measures particularly as regards taxation, regulations and standards, incentives to use everyday means (public transport and comprehensive energy systems), public information and R & D. Energy policies, aimed at encouraging efficient energy use, will probably combine several of these. But before studying what sources of energy to develop tomorrow, we must think about saving energy today. Low energy yield means that there are inefficient cogs in the economic machine.



A Bamileke (Cameroon) made wooden bike to fetch the firewood



VIVANTE AFRIQUE

For most rural communities, the search for firewood is the real energy crisis

Firewood

In many developing countries, much of the energy consumed comes from resources (firewood, cow-dung and agricultural waste, for example) which have not so far entered international statistics. The old adage whereby only the rich can save proves untrue in the context of that other energy crisis — firewood. The poor have to make a proper job of managing their energy resources because of the importance of energy in domestic life, agriculture, the creation of productive employment and balanced trade with other nations. As in the industrialized world, energy consumption has major beneficial effects on the environment. And the additional advantages of keeping social options thanks to a lesser dependency on certain sources of energy cannot be overlooked. With the right techniques, more efficient use can be made of firewood and animal and agricultural waste to meet energy requirements in rural areas.

Alterations to a stove can make a big difference to the energy yield of firewood. The bioconversion of animal and agricultural waste into methane and organic fertilizer is good resource management. There are many other techniques for making the best use of the abundant renewable sources of energy in the world. If they were applied, the environment would be improved and considerable savings made on fossil fuels.

The conservation of energy obviously has a number of beneficial effects on both the economy and the environment. Taken seriously today, it will mean that the world's limited supplies of high-quality fuel will last longer. It will enable future generations to have their share of the Earth's non-renewable supplies of fossil fuel and the preservation of energy will mean that some of this fuel can be used for non-energy purposes, for medicines, lubricants and other chemical compounds. It will reduce the environmental deterioration which goes hand-in-hand with our present energy production techniques.

It will reduce or abolish altogether our dependency on uncertain sources of energy during the search for more dependable, lasting ones. And it will reduce the chance of crossing a climatological threshold (e.g. through the production of anhydrous carbon or the regional concentration of heat) which might have devastating consequences. □

The energy sector in the ACP countries

A first data-based approach to the situation, prospects and problems

by Günter F. EICH

The ACP countries: a cross-section of LDCs

Nearly half the 114-odd countries in the world classified as developing countries are linked to the European Community by a system of special relationships based on the Lomé Convention. This Convention is halfway through now, and negotiations on its successor opened at the end of July. These important talks, and the EEC Commission's proposal to include energy questions in the Community's relations with less-developed countries (LDCs), are the background to this article.

The Commission's memo to the EEC Council of Ministers on cooperation with developing countries in the field of energy is global in that it refers to all developing countries. Nevertheless, it evidently has a special chance of implementation in the countries which are linked to the Community, such as those of the southern Mediterranean and especially the ACP countries. The memo states that EEC-ACP relations should be a framework for the Community's initiative, but the experience should be valid for the LDCs in general because the ACP countries represent a wide cross-section of the developing world.

Their different energy situations

The Lomé Convention brings together such extremely different partners as:

- rich OPEC countries such as Nigeria, and some others which will probably develop in the same direction and have already applied for full or associate OPEC membership, like Gabon and the Congo;
- and some of the poorest countries of the world, such as the African states of Rwanda, Mali, etc.

Energy projects will clearly be influenced by the different natural and demographical conditions and economic peculiarities of such different countries. They include:

- very poorly-developed countries with small populations, such as Chad and the Central African Empire;

- countries with enormous natural resources and large populations, such as Nigeria and Zaire;

- islands in the Caribbean strategically placed at the crossroads of world East-West and North-South sea routes and between the rich energy resources of Latin America and the energy-hungry United States;

- certain Pacific islands situated outside the main traffic routes and with few connections to world economies.

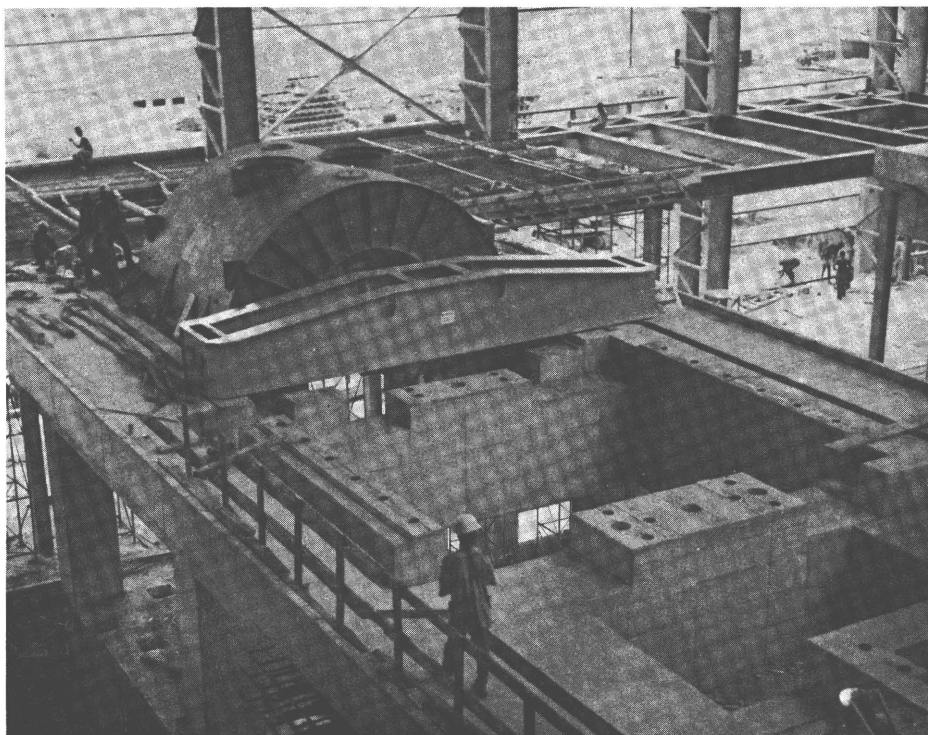
With respect to the energy situation, there are:

- energy exporters with rich oil resources (Nigeria, Gabon, Congo, etc.);

- countries principally dependent on energy imports with no known existing fossil energy resources;

- import-dependent countries with energy resources which they are unlikely to use themselves (e.g. Chad and Niger, both disposing of important uranium resources);

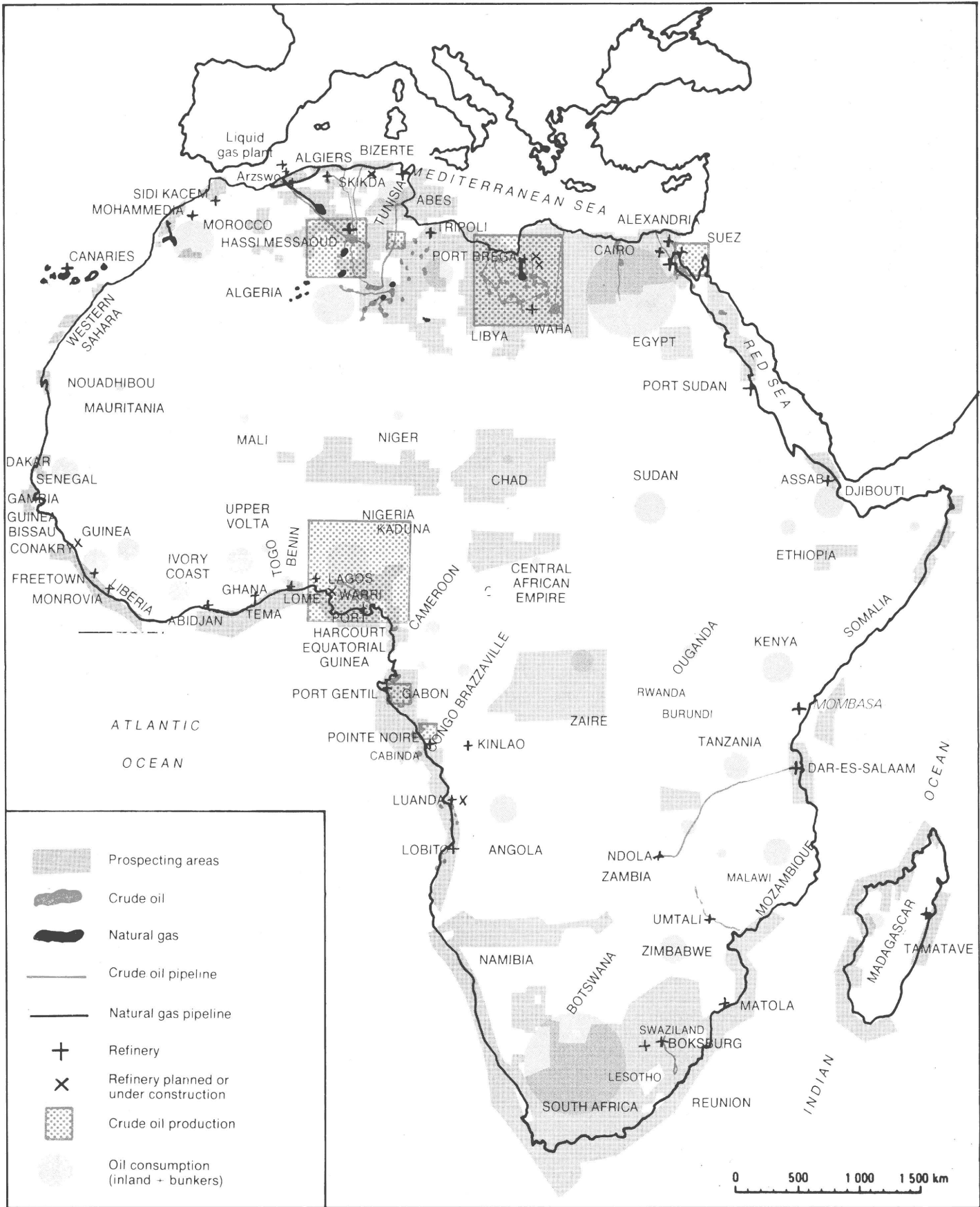
- and, as a final type, those islands in the Caribbean which, even on a global scale, represent vast refining centres transforming their own natural resources, or those



Energy, a key factor of economic development
Building a power station in Nigeria

Oil and gas in Africa

situation: beginning of 1978





Drilling rig off Port Gentil (Gabon)

Thanks to oil, Gabon has the highest nominal GNP per capita of all ACP countries except the Bahamas

imported from nearby, into finished products which form an important part of the international oil trade.

These very different characteristics of the ACP countries make the challenge of energy cooperation all the more complicated.

action initiated by industrialized countries to enhance the growth of developing countries, and at the same time their demand capacity as a stimulant of the world economy, must take account of the problem of energy supply in the developing countries.

Energy: a key factor of economic development

The energy sector of the developing countries must be developed for a complex mixture of economic, social, humanitarian, political and other reasons. Energy is now looked upon as a key element in any economic development, comparable in importance only to such basic factors as capital and skilled labour. The lack of these is one of the main reasons for the economic and social stagnation characteristic of economic and social under-development(1).

Economic development nowadays is not only to be seen from the point of view of an individual country, but also in the framework of global economic problems. In this respect, the economic development of the LDCs will be one of the most dynamic factors of world economic growth in the years to come. This is one of the most important links between industrialized nations, like the EEC countries, and developing countries, like those which are united under the Lomé Convention.

Within this framework, energy has now become one of the priorities of any resource transfer programme to LDCs. Any

The lack of adequate information

The role of energy in the economic and social development of LDCs is not yet very deeply researched. An increasing number of reports are being written, but, to a large extent, the good intentions of the authors or responsible institutions have been more apparent than has the informative value of these studies.

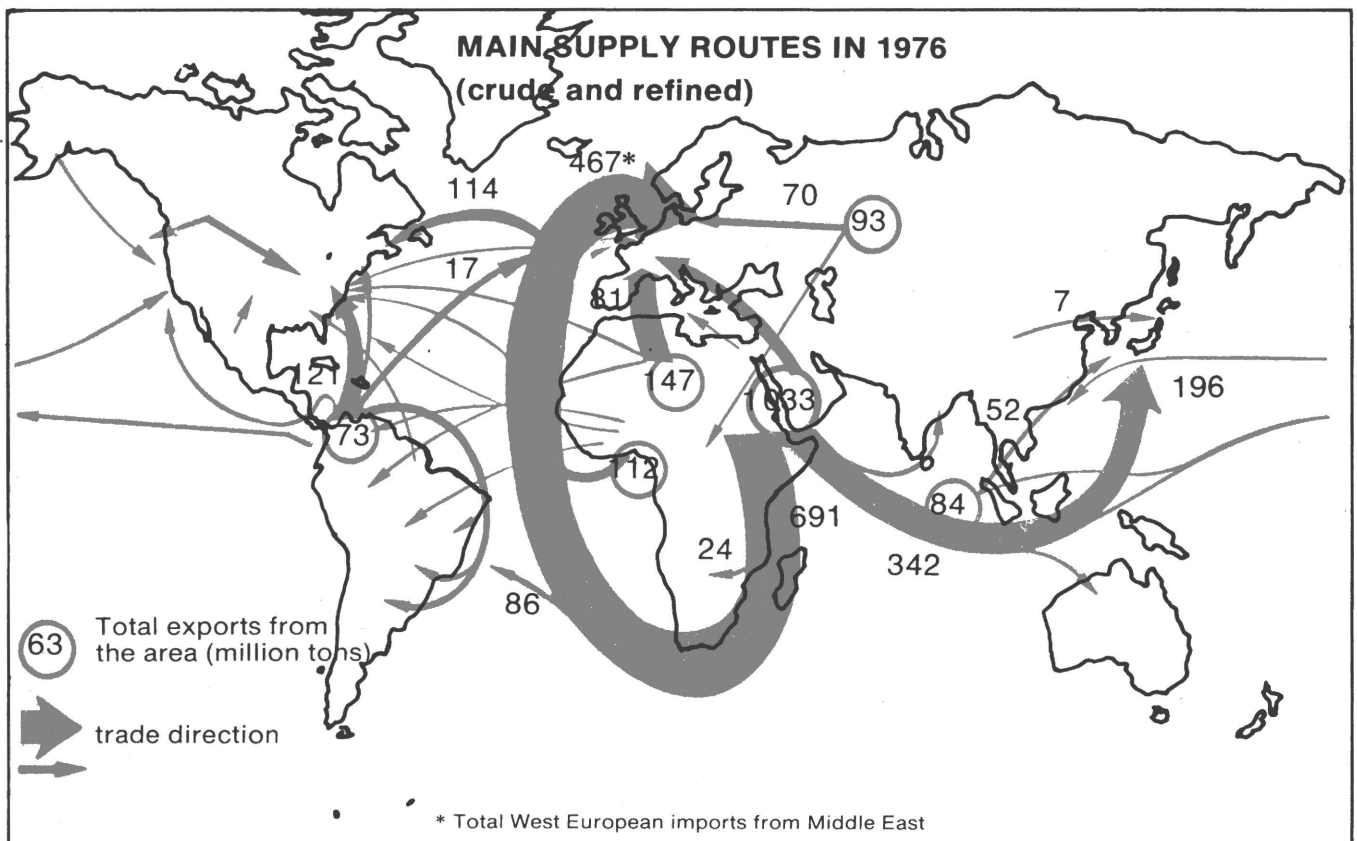
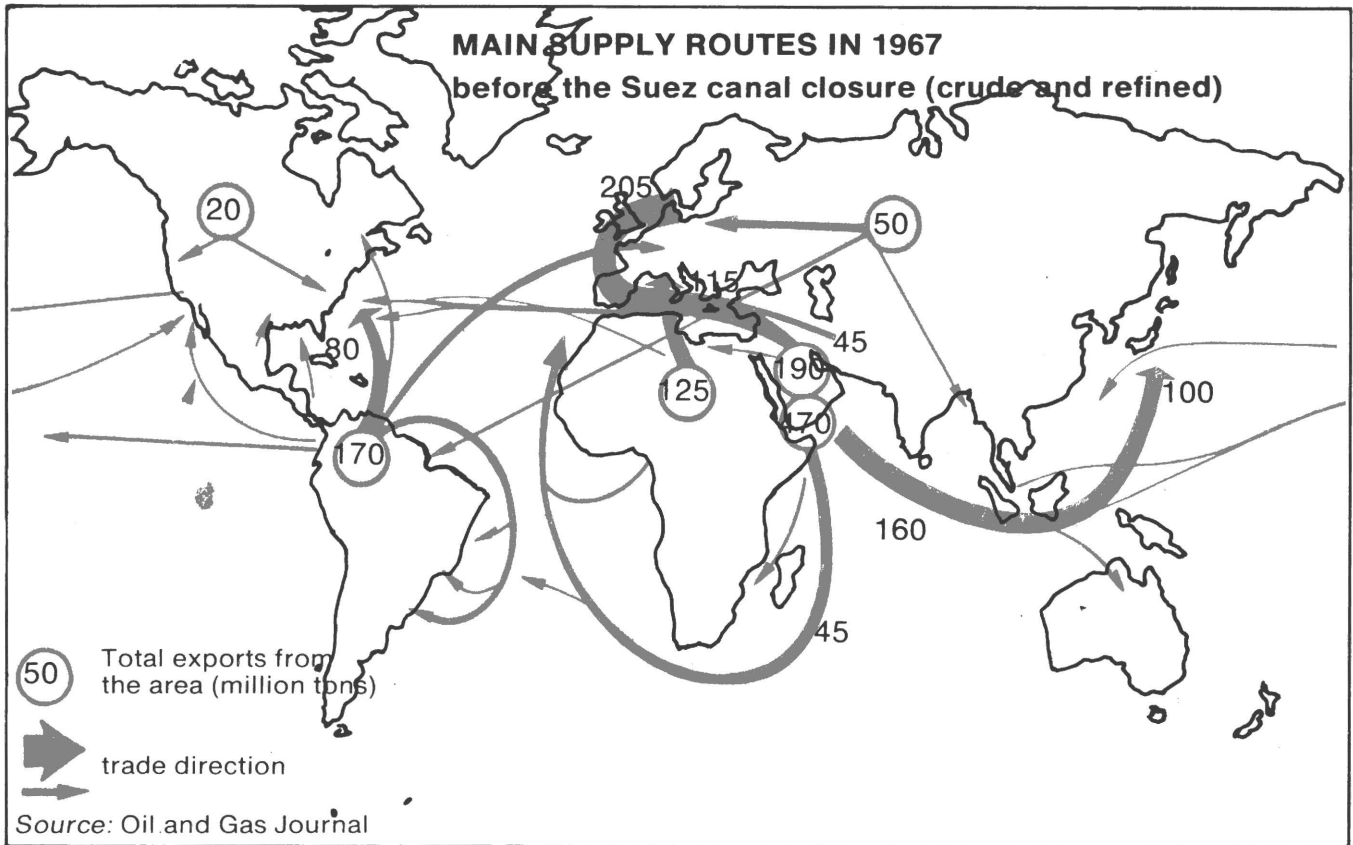
Moreover, some energy development projects involving enormous technical and financial means have completely failed to achieve their aim of improving a certain country's or region's energy supply situation.

The lack of theoretical evaluation of energy problems as a factor in the economic and social development of LDCs, and the lack of information on the actual situation in the developing world, have both contributed to some misleading approaches and delays in this sector.

Of course, the industrialized countries themselves have not yet given a convincing impression that they have completely succeeded in determining the place of energy in public and private planning for economic and social development. The difficulties in compiling reliable and meaningful information, which even the most advanced industrialized nations still have to face and in drawing the right

(1) See article by the same author in *Association News* (as the *Courier* was formerly called) no. 29, January-February 1975.

The world oil trade



conclusions from the data, should be borne in mind when trying to describe and analyse the energy sector in the developing countries.

It is only very recently that basic data on this subject has become available at all, thanks to the efforts of the United Nations Department of Economic and Social Affairs. The International Bank for Reconstruction and Development (the World Bank) has also developed certain theories on this subject. The data compiled by these institutions and their regional sub-organizations is the main basis of this first data-based approach to the energy situation in the ACP states.

There are also methodological problems; the sense and comparability of the data still remain obscure in many cases, especially if certain details are examined. This article is limited to a cautious description of the main features of the ACP energy situation, based on the real facts and figures. Selected data is presented in standardized tables for comparison, which is the first step towards a systematic approach in this field. In five tables annexed, the following features are briefly analyzed:

- relationship between energy consumption and economic and social development (as expressed by the Gross National Product);
- development of inland energy requirements;
- structure of energy demand;
- principle sources of fossil and renewable energy;
- main features of the oil supply structure.

Problems of energy forecasting for LDCs

This article does not contain quantified forecasts but does point out some recognizable prospects and trends. There are particular problems with energy forecasting in developing countries. Even in highly developed industrialized countries, energy forecasts established by public authorities as well as by private enterprises and scientific institutions often fail, or else the information is misinterpreted, despite some of the best information services in the world.

Information services in nearly all developing countries are still embryonic in comparison. Besides insufficient and outdated data, the unsteadiness of development in the past is the main obstacle to accurate projection.

The growth rates of energy demand in the ACP countries show very different developments. Small variables make big differences. In some cases, growth rates derived from existing data are zero or even negative (for instance, in Uganda and the Central African Empire).

The future energy demand of the developing countries will therefore not be a simple linear continuation but a sudden, more or less steep take-off, influenced mainly by the following factors:

- population growth;
- general economic and social development;
- type and size of industrialization;
- transport;
- availability of indigenous resources of primary energy;
- climate.

Clearly, generalizations are to be avoided.

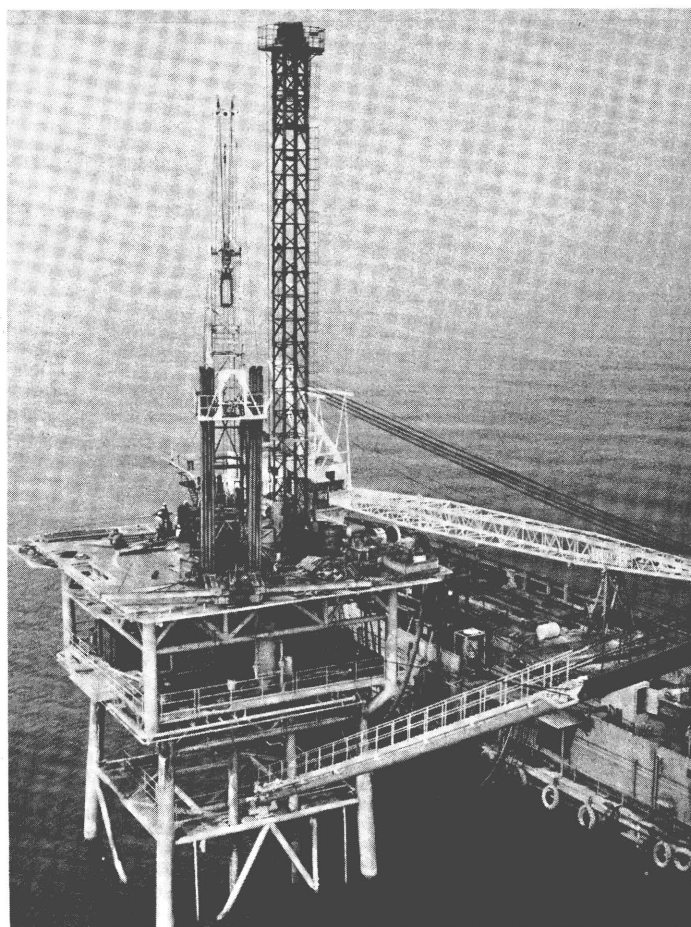
Relationship between energy consumption and economic and social development

In the first table, the ACP countries have been listed in ascending order according to their Gross National Products per capita as reported for 1976. For comparison, the development of the per capita energy consumption for the years 1971-1975 is shown for each country.

At first sight, this data confirms that there is some relationship between energy demand and per capita GNP, i.e. that the level of social and economic development depends on the energy input. A first general analysis shows that:

- for countries with a per capita GNP up to \$180, none reaches a per capita energy consumption level of 100 kg of coal equivalent;
- \$180-360 capita: about two-thirds of these countries show a demand level of 100 kg coal equivalent and more;
- \$361-580: more than half over 200 kg per capita, some substantially more;
- \$581-1000; half over 300 kg;
- of the "rich" countries with per capita GNP of more than \$1000, in general the consumption level is more than 1000 kg, with only two exceptions.

A closer look shows that there are substantial variations from country to country, and especially that **there is no direct linear relationship between GNP and energy consumption**. There are countries with a relatively high GNP level and relatively low energy demand level (for example, Djibouti and Ghana); and there are countries with relatively low GNP levels and relatively high energy demand levels,



Off-shore rig in operation near Pointe-Noire (Congo)

e.g. Zambia and Liberia. The spectrum of differences may be illustrated by the following examples. The ratio between GNP and energy consumption is: for Ghana, 3:1; for Grenada, 1:1; for Guyana, 1:2. The reasons for this are complex: climate, level of economic and social development, importance in international transport, etc., which cannot be considered here in detail. But the few examples demonstrate sufficiently clearly that each country has to be considered as a unique case.

Inland energy requirements

Table 2 gives an overall view of the development of total apparent inland consumption of commercial primary energy in the ACP countries.

The data refers exclusively to energy classified as "commercial". This definition excludes certain traditional sources of energy which still play an important role in developing countries, such as wood, manure, etc. It is estimated that this "non-commercial" energy could amount in some cases to an additional 0.2 tons of coal equivalent per capita of additional energy consumption. To illustrate the magnitude of this problem, it should be mentioned that the total fuel wood sold was estimated in 1975 for Africa to amount to 275 million cubic metres. Tanzania alone registered about 37 million cubic metres of fuel wood produced and sold.

Apart from this methodological limitation, the data refers to "apparent inland consumption", which is derived from applying the formula:

Production + imports - exports - bunkers ± additions to stocks.

Nevertheless, even the application of this generally adopted formula comprises certain problems. In some cases the "apparent consumption" may represent only an indication of the magnitude of the actual, i.e. measured, gross inland availability, especially when stock data is unavailable, or unreliable, or when apparent consumption is a small residual element derived from calculations between large aggregate series sensitive to small variations.

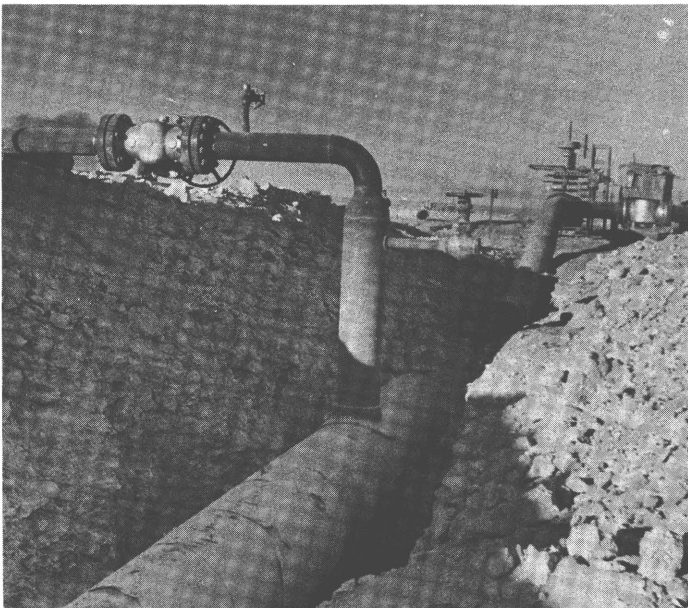
The latter point is also true for per capita consumption calculations. When the quantities or populations involved

TABLE A

Total national energy requirements

(Total inland consumption plus maritime and air bunker deliveries) in million tons of coal equivalent

| | 1975 | | |
|-------------------|------------------------|------------------------------|-------------------------------------|
| | Inland consumption (a) | Maritime and air bunkers (b) | Total national requirements (a + b) |
| Senegal | 0.807 | 1.2961 | 2.103 |
| Sierra Leone | 0.318 | 0.163 | 0.481 |
| Djibouti | 0.048 | 0.720 | 0.768 |
| Kenya | 2.325 | 0.699 | 3.024 |
| Madagascar | 0.529 | 0.188 | 0.727 |
| Mauritius | 0.239 | 0.253 | 0.492 |
| Bahamas | 1.281 | 0.724 | 2.005 |
| Barbados | 0.264 | 0.368 | 0.632 |
| Trinidad & Tobago | 3.373 | 1.767 | 5.540 |
| Fiji | 0.334 | 0.211 | 0.545 |



Pipelines across the desert

Conventional energy needs an expensive distribution network

are small, such small variations as stock additions or withdrawals may have exaggerated effects on the figures.

These considerations have to be examined for any particular country, but some general conclusions may be drawn.

The first one concerns the different developments within individual countries. There are countries with very strong growth rates (e.g. Nigeria, Kenya, Mauritius); others with modest growth rates (Equatorial Guinea, Rwanda); some with zero rates (Mauritania, Congo); and some with negative rates (Guinea, Liberia, Togo, Central African Empire, Uganda, etc.).

Many countries show a clear fall in their development rates after 1973/74, as a direct consequence of the oil crisis, which in many cases led to drastic reductions in energy consumption and supply. Obviously those countries at the lower end of the list have the most marked negative growth, whereas those with a higher level of development have succeeded better in absorbing the effects of the oil crisis and oil price rises. Nevertheless, the figures show that few of these countries have regained a balanced supply and demand situation.

Another point of interest results from the comparison of the 1975 demand figures and the consumption per capita. It shows that **there is no direct correspondence between the overall national demand and the average per capita consumption level**, as the following examples may illustrate. Nigeria has the biggest energy consumption amongst ACP countries, with 5.6 million tons of coal equivalent; but this represents only 90 kg of coal equivalent per capita, which ranks amongst the lowest. Gabon, on the other hand, has a total consumption of only 540000 tons coal equivalent, but this represents a per capita level of 1026 kg — more than 10 times as high as Nigeria.

The bunker trade figures (for maritime and air transport) have been excluded from the calculation of apparent inland demand. This is not only a methodological question (difficulties in separating these figures clearly from inland demand and foreign trade figures). Data on total national energy requirements certainly should take into account this additional demand, which has to be supplied by the country and reflects its economic activities in the transport sector. The volume of fuel in bunkers will vary widely, from negligible quantities to representing the bulk of total nation-

al requirements. It is sometimes even higher than the inland demand (as in Senegal, Djibouti, Mauritius, et. al.) and often represents at least an important part of the total requirements, as shown in table A which gives some examples.

Structure of energy demand

Apart from the overall development of energy requirements, it is very important to know how this demand is composed. Table 3 shows the structure of apparent inland energy consumption by primary sources of commercial energy in 1975. These primary sources of energy are:

- solid fuels;
- liquid fuels (and oil products);
- natural gas;
- and hydroelectricity.

The methodological difficulties mentioned become even more complicated when it comes to working out the breakdown of total energy needs by solid, liquid and gas resources.

Nonetheless, the table gives a clear idea of the very different energy demand structures in the 53 ACP countries. The spectrum ranges from countries disposing of all sources of measured energy (e.g. Nigeria) to those which have only one resource (Benin, Niger, etc.). The energy mix, that is the proportion to which the different primary energy sources contribute to the national energy supply, shows many variations and national particularities which cannot be described here in detail for each country, but which might be elaborated from the data in table 3.

It is interesting to note that coal is used in only 16 ACP countries, mostly in very modest quantities — only Zambia and Zaire are exceptions. Natural gas is used only in 6 ACP countries, mainly in Nigeria and Trinidad and Tobago.

Hydroelectricity contributes to the energy supply of over half the ACP countries (28), but the quantities involved are mostly of marginal importance. Only in Zambia, Ghana, Zaire and Nigeria does this energy resource play a bigger part. Without exception, liquid fuels are consumed in all 53 ACP countries.

The predominant role of oil

The bulk of energy consumption in all ACP countries is covered by liquid fuels, i.e. petroleum products, comprising mostly motor gasoline, fuel oils and other fuels.

The contribution of liquid fuels to the national energy balances varies widely, but in only two ACP countries (Zambia and Trinidad and Tobago) is it below 50%. In the remaining 51 ACP countries, oil accounts for more than 50% of the national energy supply. In 37 ACP countries, oil contributes between 90 and 100%. In 23 cases, it is 100% (see table below). These figures demonstrate dramatically the dependence of the ACP countries on oil as their main source of energy, in the past and, no doubt, for a certain period to come. Their dependence on oil and the financial burden this represents are clear. It is a vicious circle which cannot be broken in many cases without external help.

This being so, it is important to know the structure of the oil supply in order to evaluate an individual country's overall energy situation and prospects. Such a far-reaching analysis is beyond the limits of this article, but table 5 gives an overall idea of the main features of the ACP countries' oil supply structure(1). This table shows that, despite the fact that most ACP countries have established new refineries, some of which are already supplied by indigenous crude oil

(1) For a more detailed report on the origins and the development of the oil sector in the ACP countries, see "The petroleum situation in the overseas associated states and territories of the European Communities", by the same author, in *European Petroleum Directory*, Hamburg, 1970.

TABLE B

% share of oil (liquid fuels) in total ACP consumption of primary energy (situation: end 1975)

| | 100% | 99-95% | 89-80% | 89-90% | 77-70% | 69-60% | 59-50% | < 50% |
|---------------|--|--|--|----------------------------|-------------------|------------------|--------|-------------------|
| Africa | Benin Cape Verde Chad Djibouti Equat. Guinea Gambia Guinea Guinea Bissau Niger Sao Tome Princ. Senegal Sierra Leone Somalia Tanzania | Ivory Coast Mali Mauritania | Burundi Ethiopia Kenya Liberia Centr. Afr. Emp. Congo Sudan | Gabon Nigeria Uganda | Cameroon Ghana | Rwanda Malawi | Zaire | Zambia |
| Other regions | Bahamas Barbados Comoros Fiji Grenada Guyana Seychelles Tonga W. Samoa | Jamaica Mauritius Papua N. Guinea | Madagascar | | Surinam | | | Trinidad & Tobago |

production, the bulk of the ACP countries' requirements has to be supplied by imports of finished products. Out of the 53 ACP countries, there are only four net oil exporters. The remaining 49 are net oil importers.

Principal indigenous resources of primary energy

The development of energy in the developing countries, and the ACP countries in particular, is strongly dependent on the availability of indigenous energy resources.

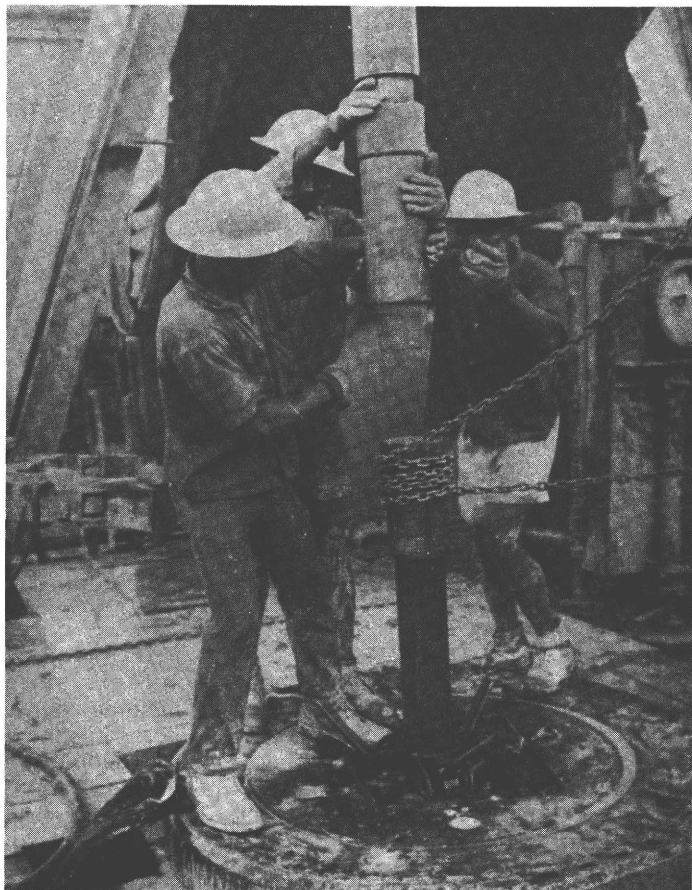
These resources of primary energy can be divided into two main categories:

- fossil resources, covering mainly: crude oil, natural gas, shale oil, bituminous coal, lignite and uranium;
- renewable energy resources: mainly solar energy, wind, water power, geothermal, tidal, biomass cultivation, afforestation (wood).

Table 4 gives the available information on the primary energy resources of the ACP countries as of mid-1978. It is a rather schematic summary, but which nevertheless permits some interesting insights into the structure, and certain development prospects, of the countries' energy economies and policies. Moreover, we have tried to give some figures on the reported estimated recoverable reserves of some energy resources as far as they are known, and evaluations are available, from published, though extremely scattered, sources (see table B below). A closer look at the different primary energy sources gives the following summary.

Crude oil

Seven of the 53 ACP countries produce crude oil, and in two others production is under development. It has to be



The African coast has rapidly become one of the most promising areas for oil prospecting

added that this is the result of activities started only within the last decade. However, exploration activities are under way. Only 21 out of the 53 have not yet been subject to exploration activities. It is remarkable that nearly all African countries report exploration, including offshore activities. The African offshore area is now classified by experts as one of the most promising oil prospecting zones.

Natural gas

Natural gas resources have been reported for nearly all countries in which oilfields have already been discovered. In addition, Somalia and the Sudan have considerable gas resources with no oil finds. Natural gas plays a major part only in Trinidad and Tobago, which exports substantial quantities to the Latin American mainland.

Shale oil

Only one ACP country, Madagascar, has worthwhile resources of a special, very heavy type.

Bituminous coal

Coal deposits sufficiently large to be commercially viable have been located only in six African ACP countries up to now, in four of which mining has already started.

Lignite

Two countries have lignite resources which might be commercially worthwhile.

Uranium

The search for uranium has accelerated remarkably during the last two decades. Today, prospecting is under way in 13 ACP countries, mainly in Africa, and four countries have started production destined for export.

Wood

In most of the ACP countries wood is still a very important traditional energy resource, which will probably remain important in future. In 41 ACP countries fuel wood is retailed through commercial structures, but the quantity involved is very difficult to estimate.

Turning to the renewable energy resources (water power, solar and wind energy), some information may be indicated.

Water power

Water power is used in more than half of the ACP countries to generate electricity, but sometimes on a very small-scale basis. The potential for further utilization of this energy is only very vaguely known.

Wind

This form of energy could be applied in numerous ways in countries with high and constant wind levels. According to the scattered and insufficient information on this subject, some countries have favourable conditions in respect of wind levels; those which are not classified as such may nevertheless, in exceptional cases (depending on the sites chosen and seasonal differences in wind) offer possibilities for wind use. According to this formula, all ACP countries have some wind power potential.

Solar

Solar energy offers nearly inexhaustible energy resources for the ACP countries, with no exceptions.

TABLE C

ACP states: reported estimated recoverable reserves of primary energy resources (as of 1.1.78)
(all figures expressed in original units)

| | Crude oil (1 000 bbl.) | Natural gas (10 ⁹ cu. ft.) | Shale oil | Bituminous coal (million tonnes) | Lignite (million tonnes) | Uranium: exploitable | | | | | | | |
|-----------------------|---------------------------|--|-----------|-------------------------------------|-----------------------------|---|---|-----------------------|---|---|---|-----------------------|---|
| | | | | | | At less than \$10 per pound U ₃ O ₈ | | | | At more than \$10 per pound U ₃ O ₈ | | | |
| | | | | | | Reasonably certain | | Additional estimated | | Reasonably certain | | Additional estimated | |
| | | | | | | 1 000 tons of uranium | 1 000 short tons of U ₃ O ₈ | 1 000 tons of uranium | 1 000 short tons of U ₃ O ₈ | 1 000 tons of uranium | 1 000 short tons of U ₃ O ₈ | 1 000 tons of uranium | 1 000 short tons of U ₃ O ₈ |
| West Africa | | | | | | | | | | | | | |
| Niger | | | | | | 40 | 52 | 20 | 26 | 10 | 13 | 10 | 13 |
| Nigeria | 18 700 000 | 43 000 | | 350 | ? | | | | | | | | |
| Senegal | ? | ? | | | | | | | | | | | |
| Central Africa | | | | | | | | | | | | | |
| Cameroon | 60 000 | ? | | | | | | | | | | | |
| Central African Emp. | | | | | | | | | | | | | |
| Congo | 360 000 | 10 | | | | 8 | 10.5 | 8 | 10.5 | — | — | — | — |
| Gabon | 2 050 000 | 2 450 | | | | 20 | 26 | 5 | 6.5 | — | — | 5 | 6.5 |
| Rwanda | | ? | | | | | | | | | | | |
| Zaire | 150 000 | 50 | | 73 | | 1.8 | 2.3 | 1.7 | 2.2 | — | — | — | — |
| East Africa | | | | | | | | | | | | | |
| Sudan | ? | 100 | | | | | | | | | | | |
| Tanzania | | 50 | | | | | | | | | | | |
| Zambia | | | | 115 | | | | | | | | | |
| Indian Ocean | | | | | | | | | | | | | |
| Madagascar | | | ? | 60 | ? | | | | | | | | |
| Caribbean | | | | | | | | | | | | | |
| Barbados | 1 000 | | | | | | | | | | | | |
| Trinidad and Tobago | 650 000 | 8 500 | | | | | | | | | | | |

Sources: Crude oil: *The oil and gas journal*; Natural gas: *The oil and gas journal*; Uranium: *OECD*.
? Resources known to exist but not yet evaluated.

As regards the other renewable energy resources (mainly geothermal, tidal and land suitable for biomass cultivation and afforestation), the information available is quite insufficient and intensive research is required.

This analysis has attempted to outline the common factors of the energy situation in the developing, and especially the ACP, countries. But it has also demonstrated that the combinations of such factors as demand patterns, supply structures and resource prospects are very different in all 53 ACP countries, which underlines the necessity of an individual approach to the energy problems of each country.

Perhaps the most important point is that the available information is far from satisfactory. Improvements in this field are urgently needed. The available information only gives a general, overall picture and is mostly insufficiently reliable for the detailed examination which is needed for the particular situation in each country, let alone for making

international comparisons. The data is often so out of date as to be virtually useless for economic planning. And even the much better information on energy available in the industrialized countries has not proved a foolproof basis for drawing up energy policies. In the developing countries, the necessity of careful data handling and interpretation in the field of energy is still more imperative.

For practical purposes, the main conclusion of this article is that, despite their having certain elements in common, the individual combinations of the relevant factors of energy development — technical, economic, natural, geological, and social — have to be examined and taken into account for each ACP country. This will be a permanent new challenge for any cooperation effort in the energy field. Standardized schemes, applied in the same manner, are not the answer. All development policies have to be carefully adapted to the specific national situation of the country in question. □

G.F.E.

TABLE 1

ACP states in order of GNP per capita:
Energy consumption per capita 1971-1975

| | GNP per capita in 1976 (US\$) | Energy consumption per capita (kilogrammes of coal equivalent) | | | | |
|--------------------------------|--|---|-------|-------|-------|-------|
| | | 1971 | 1972 | 1973 | 1974 | 1975 |
| GNP per capita (US\$ 180) | | | | | | |
| Rwanda | 98 | 11 | 13 | 13 | 13 | 14 |
| Mali | 101 | 23 | 25 | 25 | 25 | 25 |
| Ethiopia | 103 | 31 | 33 | 33 | 31 | 29 |
| Somalia | 114 | 32 | 34 | 37 | 40 | 36 |
| Upper Volta | 115 | 14 | 15 | 17 | 18 | 20 |
| Burundi | 121 | 16 | 17 | 14 | 13 | 13 |
| Chad | 123 | 25 | 18 | 24 | 49 | 39 |
| Benin | 133 | 44 | 52 | 50 | 41 | 52 |
| Malawi | 136 | 51 | 55 | 56 | 54 | 56 |
| Zaire | 138 | 85 | 25 | 80 | 79 | 78 |
| Guinea | 154 | 102 | 98 | 92 | 94 | 82 |
| Niger | 156 | 27 | 29 | 34 | 31 | 35 |
| Lesotho | 165 | | | | | |
| Tanzania(*) | 178 | 53/71 | 52/73 | 50/97 | 49/74 | 59/70 |
| GNP per capita (US\$ 180-360) | | | | | | |
| Gambia | 183 | 56 | 67 | 60 | 67 | 66 |
| Sierra Leone | 201 | 115 | 83 | 120 | 123 | 116 |
| Madagascar | 205 | 74 | 71 | 77 | 73 | 71 |
| Central African Emp. | 231 | 61 | 54 | 53 | 36 | 34 |
| Uganda | 236 | 75 | 69 | 61 | 59 | 55 |
| Kenya | 238 | 143 | 134 | 148 | 171 | 174 |
| Togo | 261 | 79 | 80 | 77 | 70 | 65 |
| Comoros | (270) | 50 | 49 | 49 | 48 | 51 |
| Sudan | 291 | 121 | 135 | 133 | 125 | 140 |
| Cameroon | 309 | 87 | 86 | 87 | 89 | 104 |
| Western Samoa | (315) | 113 | 122 | 129 | 126 | 160 |
| Tonga | (320) | 137 | 173 | 170 | 159 | 153 |
| Equatorial Guinea | 334 | 92 | 117 | 84 | 87 | 101 |
| Mauritania | 340 | 125 | 123 | 119 | 111 | 108 |
| Grenada | (350) | 347 | 340 | 344 | 323 | 323 |
| GNP per capita (US\$ 361-580) | | | | | | |
| Nigeria | 380 | 64 | 70 | 81 | 93 | 90 |
| Senegal | 386 | 130 | 159 | 182 | 184 | 195 |
| Botswana | 405 | | | | | |
| Zambia | 435 | 497 | 528 | 539 | 487 | 504 |
| Liberia | 452 | 447 | 394 | 374 | 432 | 404 |
| Guinea Bissau | (460) | 54 | 53 | 94 | 77 | 82 |
| Swaziland | 466 | | | | | |
| Papua New Guinea | 494 | 167 | 253 | 268 | 300 | 278 |
| Congo | 516 | 234 | 207 | 202 | 216 | 209 |
| Cape Verde | (570) | 57 | 55 | 92 | 62 | 69 |
| GNP per capita (US\$ 581-1000) | | | | | | |
| Ghana | 584 | 149 | 159 | 176 | 175 | 182 |
| Sao Tome Principe | (580) | 69 | 87 | 105 | 104 | 102 |
| Seychelles | (600) | 351 | 372 | 386 | 426 | 481 |
| Ivory Coast | 609 | 314 | 331 | 365 | 370 | 366 |
| Guyana | 614 | 1 086 | 1 037 | 1 153 | 965 | 1 114 |
| Mauritius | 676 | 100 | 234 | 234 | 274 | 279 |
| GNP per capita (US\$ 1000) | | | | | | |
| Jamaica | 1 071 | 1 526 | 1 470 | 1 441 | 1 443 | 1 427 |
| Fiji | 1 152 | 478 | 491 | 432 | 553 | 582 |
| Surinam | (1 500) | 2 496 | 2 222 | 2 227 | 2 155 | 2 063 |
| Djibouti | (1 715) | 416 | 469 | 461 | 490 | 540 |
| Barbados | 2 000 | 918 | 985 | 1 062 | 1 020 | 1 078 |
| Trinidad and Tobago | 2 239 | 3 938 | 4 129 | 4 242 | 3 762 | 3 132 |
| Gabon | 2 589 | 925 | 900 | 970 | 1 005 | 1 026 |
| Bahamas | 3 311 | 6 094 | 9 170 | 7 348 | 6 604 | 6 279 |

(*) Energy consumption: first figure refers to Zanzibar, second figure to Tanganyika.

Sources: GNP data — World Bank and estimates from national sources (estimates in brackets). Energy data — United Nations.

TABLE 2

ACP states: Total apparent inland consumption of commercial primary energy
(in million tonnes of coal equivalent and in kilogrammes per capita)

| | Total apparent inland consumption | | | | | Per capita consumption 1975 |
|-----------------------|-----------------------------------|-------|-------|-------|-------|-----------------------------|
| | 1971 | 1972 | 1973 | 1974 | 1975 | |
| West Africa | | | | | | |
| Benin | 0.123 | 0.150 | 0.146 | 0.124 | 0.162 | 52 |
| Cape Verde | 0.015 | 0.015 | 0.026 | 0.018 | 0.018 | 61 |
| Gambia | 0.027 | 0.033 | 0.030 | 0.034 | 0.034 | 66 |
| Ghana | 1.322 | 1.444 | 1.646 | 1.679 | 1.792 | 182 |
| Guinea | 0.410 | 0.402 | 0.385 | 0.405 | 0.405 | 92 |
| Guinea Bissau | 0.026 | 0.026 | 0.048 | 0.040 | 0.043 | 82 |
| Ivory Coast | 1.389 | 1.499 | 1.695 | 1.765 | 1.787 | 366 |
| Liberia | 0.702 | 0.626 | 0.610 | 0.720 | 0.690 | 404 |
| Mali | 0.117 | 0.129 | 0.132 | 0.140 | 0.141 | 25 |
| Mauritania | 0.149 | 0.150 | 0.149 | 0.143 | 0.143 | |
| Niger | 0.109 | 0.120 | 0.148 | 0.140 | 0.163 | 35 |
| Nigeria | 3.630 | 4.091 | 4.832 | 5.694 | 5.644 | 90 |
| Senegal | 0.522 | 0.602 | 0.705 | 0.729 | 0.807 | 195 |
| Sierra Leone | 0.299 | 0.219 | 0.321 | 0.332 | 0.318 | 116 |
| Togo | 0.158 | 0.167 | 0.163 | 0.152 | 0.145 | 65 |
| Upper Volta | 0.076 | 0.085 | 0.096 | 0.105 | 0.118 | 20 |
| Central Africa | | | | | | |
| Burundi | 0.059 | 0.059 | 0.051 | 0.048 | 0.048 | 13 |
| Cameroon | 0.514 | 0.524 | 0.538 | 0.562 | 0.668 | 104 |
| Central African Emp. | 0.099 | 0.090 | 0.091 | 0.063 | 0.061 | 34 |
| Chad | 0.094 | 0.067 | 0.094 | 0.193 | 0.158 | 39 |
| Congo | 0.286 | 0.259 | 0.258 | 0.284 | 0.281 | 209 |
| Equatorial Guinea | 0.027 | 0.034 | 0.025 | 0.027 | 0.031 | 101 |
| Gabon | 0.467 | 0.459 | 0.500 | 0.523 | 0.540 | 1 026 |
| Rwanda | 0.041 | 0.050 | 0.051 | 0.053 | 0.057 | 14 |
| Sao Tome Principe | 0.005 | 0.007 | 0.008 | 0.008 | 0.008 | 102 |
| Zaire | 1.891 | 1.949 | 1.890 | 1.924 | 1.949 | 78 |
| East Africa | | | | | | |
| Botswana | — | — | — | — | — | — |
| Djibouti | 0.040 | 0.046 | 0.047 | 0.051 | 0.048 | 450 |
| Ethiopia | 0.780 | 0.842 | 0.867 | 0.835 | 0.800 | 29 |
| Kenya | 1.666 | 1.618 | 1.852 | 2.208 | 2.325 | 174 |
| Lesotho | — | — | — | — | — | — |
| Malawi | 0.230 | 0.256 | 0.267 | 0.266 | 0.285 | 56 |
| Somalia | 0.092 | 0.099 | 0.110 | 0.123 | 0.113 | 36 |
| Sudan | 1.950 | 2.234 | 2.252 | 2.171 | 2.479 | 140 |
| Swaziland | — | — | — | — | — | — |
| Tanzania | 0.959 | 1.009 | 1.380 | 1.085 | 1.051 | 70/59 |
| Uganda | 0.760 | 0.726 | 0.654 | 0.656 | 0.630 | 55 |
| Zambia | 2.123 | 2.312 | 2.499 | 2.314 | 2.470 | 504 |
| Indian Ocean | | | | | | |
| Comoros | 0.014 | 0.014 | 0.014 | 0.014 | 0.016 | 51 |
| Madagascar | 0.511 | 0.505 | 0.559 | 0.542 | 0.539 | 71 |
| Mauritius | 0.081 | 0.194 | 0.496 | 0.232 | 0.239 | 279 |
| Seychelles | 0.019 | 0.020 | 0.022 | 0.025 | 0.028 | 481 |
| Caribbean | | | | | | |
| Bahamas | 1.085 | 1.697 | 1.418 | 1.301 | 1.281 | 6 279 |
| Barbados | 0.219 | 0.236 | 0.258 | 0.249 | 0.264 | 1 078 |
| Grenada | 0.033 | 0.033 | 0.033 | 0.031 | 0.031 | 323 |
| Guyana | 0.741 | 0.771 | 0.874 | 0.747 | 0.881 | 1 114 |
| Jamaica | 2.899 | 2.837 | 2.847 | 2.883 | 2.895 | 1 427 |
| Surinam | 0.948 | 0.867 | 0.891 | 0.886 | 0.870 | 2 063 |
| Trinidad and Tobago | 4.056 | 4.315 | 4.488 | 4.014 | 3.373 | 3 132 |
| Pacific | | | | | | |
| Fiji | 0.254 | 0.268 | 0.238 | 0.310 | 0.334 | 582 |
| Papua New Guinea | 0.421 | 0.653 | 0.687 | 0.796 | 0.766 | 278 |
| Tonga | 0.012 | 0.016 | 0.016 | 0.016 | 0.016 | 153 |
| Western Samoa | 0.016 | 0.018 | 0.020 | 0.020 | 0.024 | 160 |

TABLE 3

ACP states: apparent inland energy consumption by primary sources of commercial energy, 1975
(in million tonnes of coal equivalent)

| | Total commercial energy | of which: | | | |
|-----------------------|-------------------------------|----------------|-----------------|----------------|-----------------------|
| | | Solid fuels | Liquid fuels | Natural gas | Hydro- electricity |
| West Africa | | | | | |
| Benin | 0.162 | — | 0.162 | — | — |
| Cape Verde | 0.018 | — | 0.018 | — | — |
| Gambia | 0.034 | — | 0.034 | — | — |
| Ghana | 1.792 | 0.008 | 1.292 | — | 0.492 |
| Guinea | 0.405 | — | 0.401 | — | 0.004 |
| Guinea Bissau | 0.043 | — | 0.043 | — | — |
| Ivory Coast | 1.787 | — | 1.753 | — | 0.034 |
| Liberia | 0.690 | — | 0.650 | — | 0.039 |
| Mali | 0.141 | — | 0.137 | — | 0.004 |
| Mauritania | 0.143 | 0.006 | 0.137 | — | — |
| Niger | 0.163 | — | 0.163 | — | — |
| Nigeria | 5.644 | 0.223 | 4.597 | 0.535 | 0.288 |
| Senegal | 0.807 | — | 0.807 | — | — |
| Sierra Leone | 0.318 | — | 0.318 | — | — |
| Togo | 0.145 | — | 0.145 | — | 0.000 |
| Upper Volta | 0.118 | — | 0.118 | — | — |
| Central Africa | | | | | |
| Burundi | 0.048 | — | 0.045 | — | 0.003 |
| Cameroon | 0.668 | 0.001 | 0.527 | — | 0.140 |
| Central African Emp. | 0.061 | — | 0.055 | — | 0.006 |
| Chad | 0.158 | — | 0.158 | — | — |
| Congo | 0.281 | — | 0.251 | 0.023 | 0.007 |
| Equatorial Guinea | 0.031 | — | 0.031 | — | 0.000 |
| Gabon | 0.540 | — | 0.476 | 0.063 | 0.001 |
| Rwanda | 0.057 | — | 0.039 | 0.001 | 0.017 |
| Sao Tome Principe | 0.008 | — | 0.008 | — | 0.000 |
| Zaire | 1.949 | 0.437 | 1.072 | — | 0.440 |
| East Africa | | | | | |
| Botswana | — | — | — | — | — |
| Djibouti | 0.048 | — | 0.048 | — | — |
| Ethiopia | 0.800 | 0.003 | 0.754 | — | 0.043 |
| Kenya | 2.325 | 0.046 | 2.167 | — | 0.112 |
| Lesotho | — | — | — | — | — |
| Malawi | 0.285 | 0.060 | 0.194 | — | 0.031 |
| Somalia | 0.113 | — | 0.113 | — | — |
| Sudan | 2.479 | — | 2.464 | — | 0.015 |
| Swaziland | — | — | — | — | — |
| Tanzania | 1.051 | 0.002 | 1.008 | — | 0.041 |
| Uganda | 0.630 | — | 0.562 | — | 0.068 |
| Zambia | 2.470 | 0.891 | 0.887 | — | 0.692 |
| Indian Ocean | | | | | |
| Comoros | 0.016 | — | 0.016 | — | — |
| Madagascar | 0.539 | 0.015 | 0.503 | — | 0.021 |
| Mauritius | 0.239 | 0.001 | 0.233 | — | 0.005 |
| Seychelles | 0.028 | — | 0.028 | — | — |
| Caribbean | | | | | |
| Bahamas | 1.281 | 0.003 | 1.278 | — | — |
| Barbados | 0.264 | — | 0.261 | 0.003 | — |
| Grenada | 0.031 | — | 0.031 | — | — |
| Guyana | 0.881 | — | 0.881 | — | — |
| Jamaica | 2.895 | 0.001 | 2.878 | — | 0.016 |
| Surinam | 0.870 | 0.033 | 0.712 | — | 0.125 |
| Trinidad and Tobago | 3.373 | — | 1.618 | 1.756 | — |
| Pacific | | | | | |
| Fiji | 0.334 | 0.007 | 0.327 | — | — |
| Papua New Guinea | 0.766 | — | 0.743 | — | 0.022 |
| Tonga | 0.016 | — | 0.016 | — | — |
| Western Samoa | 0.024 | — | 0.024 | — | — |

TABLE 4

ACP states: principal known fossil and renewable resources of primary energy as of mid-1978

| | Crude oil | | | | Natural gas | Shale oil | Coal | Lignite | Wood | Uranium | | Hydro- power | Wind | Solar |
|-----------------------|---------------|--------------|---------------|--------------|----------------|--------------|------|---------|------|------------------|-----------------|-----------------|------|-------|
| | Exploration | | Production | | | | | | | Explor- ation | Produc- tion | | | |
| | main- land | off shore | main- land | off shore | | | | | | | | | | |
| West Africa | | | | | | | | | | | | | | |
| Benin | • | • | | • | | | | | • | | | | △ | • |
| Cape Verde | | | | • | | | | | • | | | | △ | • |
| Gambia | • | • | | | | | | | • | | | | △ | • |
| Ghana | • | • | | | | | | | • | | | | △ | • |
| Gambia | | | | | | | | | • | • | | • | △ | • |
| Guinea Bissau | • | • | | | | | | | • | | | • | △ | • |
| Ivory Coast | • | • | | | | | | | • | | | • | △ | • |
| Liberia | | • | | | | | | | • | | | • | △ | • |
| Mali | • | | | | | | | | • | | | • | • | • |
| Mauritania | • | • | | | | | | | • | • | | • | • | • |
| Niger | • | | | | | | | | • | | • | • | • | • |
| Nigeria | • | • | • | • | • | | • | • | • | • | • | • | △ | • |
| Senegal | • | • | + | + | + | | | | • | • | | • | △ | • |
| Sierra Leone | • | • | | | | | | | • | | | • | • | • |
| Togo | • | • | | | | | | | • | • | | • | △ | • |
| Upper Volta | | | | | | | | | • | | | | △ | • |
| Central Africa | | | | | | | | | | | | | | |
| Burundi | | | | | | | | | • | | | | • | • |
| Cameroon | • | • | • | • | • | | | | • | | | • | △ | • |
| Central African Emp. | | | | | | | | | • | • | | • | △ | • |
| Chad | • | | | | | | | | • | | | • | △ | • |
| Congo | • | • | • | • | • | | | | • | | | • | △ | • |
| Equatorial Guinea | | • | | | | | | | • | | | • | △ | • |
| Gabon | • | • | • | • | • | | | | • | • | • | • | △ | • |
| Rwanda | • | | + | | | | | | • | | | • | • | • |
| Sao Tome Principe | | | | | | | | | • | | | • | • | • |
| Zaire | • | • | • | • | + | | • | | • | • | • | • | △ | • |
| East Africa | | | | | | | | | | | | | | |
| Botswana | | | | | | | □ | | | | | | • | • |
| Djibouti | | | | | | | | | • | | | | • | • |
| Ethiopia | • | • | | | | | | | • | • | | • | • | • |
| Kenya | • | • | | | | | | | • | | | • | • | • |
| Lesotho | • | | | | | | | | • | | | • | • | • |
| Malawi | | | | | | | | | • | | | • | • | • |
| Somalia | • | • | + | | + | | | | • | | | • | • | • |
| Sudan | • | • | + | | • | | | | • | | | • | • | • |
| Swaziland | • | | + | | | | • | | • | | | • | • | • |
| Tanzania | • | • | + | | + | | | | • | | | • | • | • |
| Uganda | | | | | | | | | • | | | • | • | • |
| Zambia | • | | | | | | • | | • | • | | • | △ | • |
| Indian Ocean | | | | | | | | | | | | | | |
| Comoros | | | | | | | | | | | | | • | • |
| Madagascar | • | • | | | | □ | □ | • | • | • | | • | • | • |
| Mauritius | | | | | | | | | • | | | • | • | • |
| Seychelles | | | | | | | | | | | | | • | • |
| Caribbean | | | | | | | | | | | | | | |
| Bahamas | | | | | • | | | | | | | | △ | • |
| Barbados | | | | | | | | | | | | | △ | • |
| Grenada | | | | | | | | | | | | | △ | • |
| Guyana | • | • | | | | | | | • | | | | △ | • |
| Jamaica | | | | | | | | | • | | | • | △ | • |
| Surinam | | | | | | | | | • | | | • | △ | • |
| Trinidad and Tobago | • | • | • | • | • | | | | | | | | △ | • |
| Pacific | | | | | | | | | | | | | | |
| Fiji | | | • | • | | | | • | • | | | • | △ | • |
| Papua New Guinea | | | | | | | | | • | | | • | △ | • |
| Tonga | | | | | | | | | | | | | △ | • |
| Western Samoa | | | | | | | | | • | | | • | △ | • |

- Known and exploited resources.
- + Reported discoveries, not yet commercially evaluated.
- Resources not yet exploited.
- △ Unfavourable conditions, but wind power not excluded depending on site and season.

TABLE 5

ACP states: main features of oil supply structure as of mid-1978

| | Refining industry | Crude oil supply from | | Exports | | Importers of petroleum products | Net oil | |
|--|-------------------|-----------------------|---------|-----------|--------------------|---------------------------------|-----------|-----------|
| | | own production | imports | crude oil | petroleum products | | importers | exporters |
| West Africa | | | | | | | | |
| Benin | | △ | | | | • | • | |
| Cape Verde | | | | | | • | • | |
| Gambia | | | | | | • | • | |
| Ghana | • | | • | | • | • | • | |
| Guinea | | | | | | • | • | |
| Guinea Bissau | | | | | | • | • | |
| Ivory Coast | • | | • | | • | | • | |
| Liberia | •□ | | • | | | | • | |
| Mali | | | | | | • | • | |
| Mauritania | | | | | | • | • | |
| Niger | | | | | | • | • | |
| Nigeria | • | • | | • | • | | | • |
| Senegal | • | △ | • | | • | | • | |
| Sierra Leone | • | | • | | | | • | |
| Togo | □ | | | | | • | • | |
| Upper Volta | | | | | | • | • | |
| Central Africa | | | | | | | | |
| Burundi | | | | | | • | • | |
| Cameroon | | △ | | | | • | • | |
| Central African Emp. | | | | | | • | • | |
| Chad | | | | | | • | • | |
| Congo | • | • | | • | • | | | • |
| Equatorial Guinea | | | | | | • | • | |
| Gabon | • | • | | • | | | | • |
| Rwanda | | | | | | • | • | |
| Sao Tome Principe | | | | | | • | • | |
| Zaire | • | • | | | | • | • | |
| East Africa | | | | | | | | |
| Botswana | | | | | | • | • | |
| Djibouti | | | | | | • | • | |
| Ethiopia | • | | • | | • | | • | |
| Kenya | • | | • | | • | | • | |
| Lesotho | | | | | | • | • | |
| Malawi | | | | | | • | • | |
| Somalia | | | | | | • | • | |
| Sudan | • | | • | | | • | • | |
| Swaziland | | | | | | • | • | |
| Tanzania | • | | • | | • | | • | |
| Uganda | | | | | | • | • | |
| Zambia | • | | • | | | | • | |
| Indian Ocean | | | | | | | | |
| Comoros | | | | | | • | • | |
| Madagascar | • | | • | | • | | • | |
| Mauritius | | | | | | • | • | |
| Seychelles | | | | | | • | • | |
| Caribbean | | | | | | | | |
| Bahamas | •• | | • | | • | • | • | |
| Barbados | • | | • | | • | • | • | |
| Grenada | | | | | | • | • | |
| Guyana | | | | | | • | • | |
| Jamaica | • | | • | | | • | • | |
| Surinam | | | | | | • | • | |
| Trinidad and Tobago | •• | • | • | | • | | | • |
| Pacific | | | | | | | | |
| Fiji | | | | | | • | • | |
| Papua-New Guinea | | | | | | • | • | |
| Tonga | | | | | | • | • | |
| Western Samoa | | | | | | • | • | |
| • Represents one existing refinery in operation. □ Represents one refinery planned or under construction. △ Production has not yet started on a commercial scale | | | | | | | | |

The energy situation in some ACP countries

NIGERIA

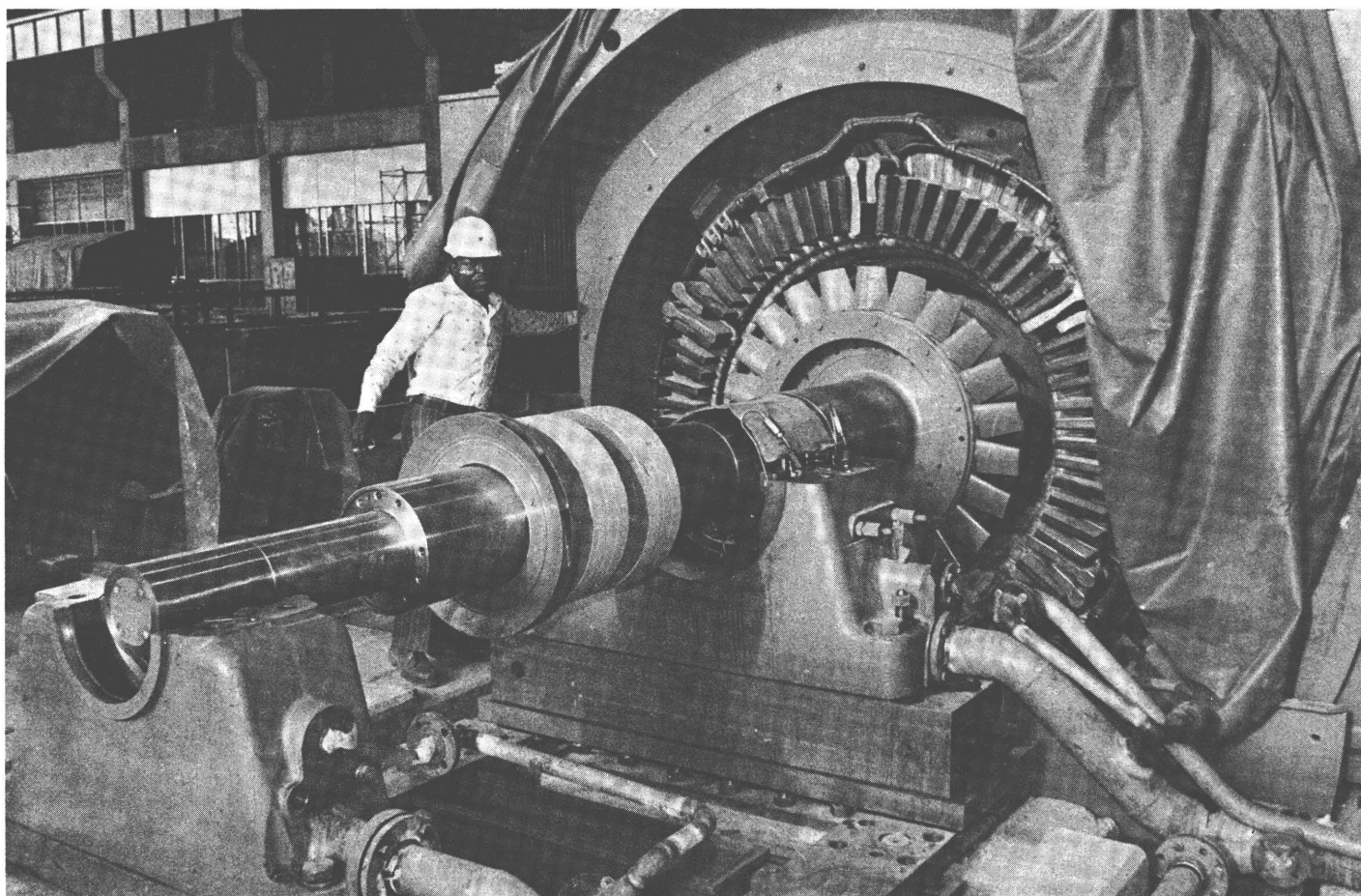
Nigeria is rich in sources of energy. There is plenty of oil, gas, coal and hydro-electric power. The problem is to develop these reserves in a way that will enable Nigeria to industrialize as smoothly and rapidly as possible. For the present, domestic and industrial demand cannot be met: there are petrol shortages and power cuts. However, during the early '80s Nigeria hopes to be satisfying demand and poised to meet the rapid increase in demand that transforming the economy, which is still largely agricultural, will entail. But predicting the level of future demand is a risky business. As one report by the National Electric Power Authority (NEPA) puts it "projects with large power demands are suddenly announced by both government and private enterprise without consideration being given to the time required to plan and provide the necessary power supply facilities".

Importing oil

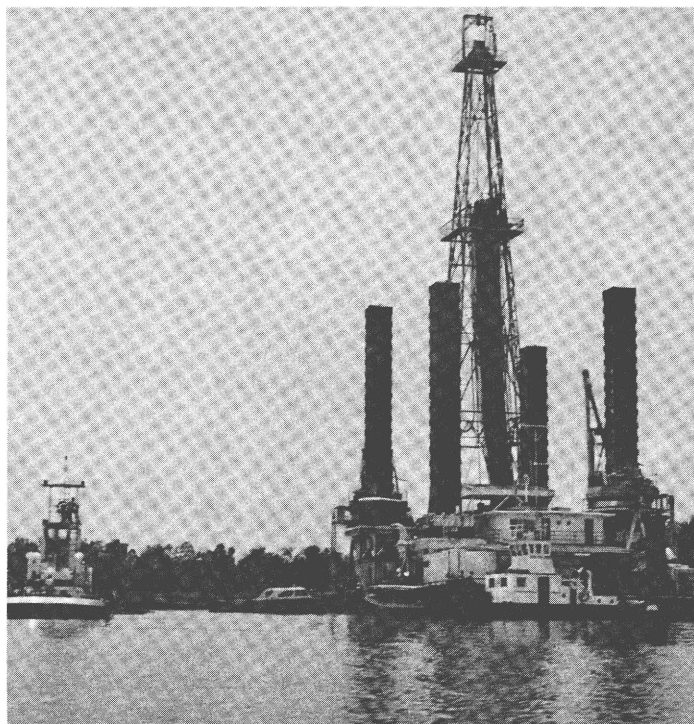
Although Nigeria is by far the largest oil exporter among the ACP countries and produces about one third of OPEC

production in Africa, it is also a major importer of oil. Nigeria's single refinery at Port Harcourt cannot meet the demand for petroleum products, so it is forced to export crude, and import gasoil, petrol and kerosene. The capacity of the Port Harcourt refinery has recently been boosted from 3 to 3.75 million tonnes a year, but the major breakthrough will come from the new Warri refinery which, opening soon, will have a capacity of 5 million tonnes. When these are joined in the early '80s by a new refinery in the north, at Kaduna, Nigeria will be able to satisfy much of the domestic demand for petroleum products. Refineries built from then on will be aimed at the export market.

The Kaduna refinery is far from the oil producing areas in the south east, but it will be fed by a new pipeline which will initially carry petroleum products from the Warri refinery, and then crude once the Kaduna plant is in operation. The construction of a refinery so far from the production zone is justified not only on the grounds that it brings industrialization to another area, but also because a pipeline would have been necessary anyway to avoid the costly and unreliable transportation of petroleum products by road. Further pipelines will link the new refineries with storage points in other parts of the country, one of the more important from Warri via Benin City to Ikorodu, will supply the Lagos area and its new international airport.



Building a power station at Sapele



A tricky operation: moving an oil-drilling platform across the Bonny River (Nigeria)

Falling production

The main importance of Nigerian oil for the economy is not as a domestic energy source, but as an export. At present, production is falling. Last year's average was 2.1 million barrels a day, slightly up on 1976, but below the peak of 2.25 million in 1974. This year began with a significant decline in production to well below 2 million barrels a day. With a very slack market for light crude, Nigeria would prefer to maintain the relatively high price it demands and cut production, but this needs the cooperation of the other two major African producers, Algeria and Libya, whose development priorities are different from Nigeria's. The fall in revenue from oil led to major international borrowing and belt-tightening in this year's budget.

Big investments in gas

One of the side products of oil production is gas, but at the moment it is simply burnt away at the rate of 18000 million cubic metres a year. To tap this huge potential and take advantage of the expected rise in world demand for liquefied natural gas (LNG) in the '80s, the Nigerian government is to build a liquefaction plant at Bonny capable of processing 1600 million cubic feet a day (45 m³). The cost will be between \$4500 and \$5000 million, with the Nigerian National Petroleum Corporation (NNPC) having a 60% interest and the remainder going to BP (10%), Shell (10%), Philips and Agip (15% between them) and ELF (5%). The government has a similar shared interest with the companies for oil exploitation. Colonel Buhari, the federal petroleum commissioner, has said that the gas gathering infrastructure will be mainly the responsibility of the government.

The processed gas will be for export, and most will probably go to the United States. At present there is little domestic demand for natural gas in Nigeria, and the high cost of the infrastructure makes it unlikely that household gas supplies could be provided to major towns in the near future. Estimates of the gas reserves go as high as 2100

billion cubic metres, which would allow the liquefaction plant to work until the middle of the next century.

On an energy equivalent basis the gas could be as great as two-thirds of the country's oil reserves and should bring Nigeria significant extra revenue in the years ahead.

Disappointment from Kainji

The unit costs of hydro-electric power in Nigeria are lower than for other ways of providing electricity, which internally is the single most important energy development area. Unfortunately the Kainji hydro-electric scheme, which was supposed to be providing 800 MW of the total grid capacity of 1233 MW this year, is providing nowhere near that. The latest figure was 520 MW. This is not the fault of the Kainji engineers, but of nature. Normally 1800-2000 cubic metres of water per second should flow through the plant, but the water level in the Niger has been unusually low. By the end of last year the flow was down to 1000 m³/second and in April this year down to 750 m³.

Kainji was planned well before the Nigerian oil boom, and even if it reached its planned output there would still be a grid deficit until 1980. As Mr Fatoye, in the ministry for mines and power put it, "the demand for power has shamed all planners". Be that as it may, the planners are now trying to make sure that there is enough electricity for the 1980s. Three other hydro-electric projects are underway at Shiroro, Jebba and Lokoja, and these will come into operation between 1981 and 1984. But the most immediate boost to the supply network will come from the thermal plant at Sapele, which will start operating at the end of the year and be producing 720 MW by 1980. In the same year new gas turbines should add another 600 MW and the reserve balance will finally move out of deficit.

In the meantime there will be power cuts. Consumers will have to be patient until NEPA can catch up on the demand. At the same time the grid itself is being expanded, creating more demand. The policy here was outlined by Mr Fatoye: "the industries of note are in the urban areas, so large population areas are given priority because we can justify the investment. But for political, social and other reasons, connection with smaller towns is going ahead". One of the priorities is to extend the high voltage grid to all the 19 state capitals in the federation. As the main growing source of household power, electricity has hardly any rivals. The kerosene stove is the main competitor. On the industrial side, demand has been growing rapidly and in the short term more thermal stations will be added to the system, despite the higher cost. A major new demand for power will come from the proposed steel plants near Warri and Port Harcourt.

A modest role for coal

The new steel plants will also need coal, which Nigeria has in abundance, although quality limits its uses. The Enugu coal mines were developed to provide fuel for the railways, but with the advent of diesel engines, demand fell sharply. Reserves are put at 500 m tonnes, but only 300000 tonnes are mined a year at present, mostly for the cement works. When the steel plants get underway, however, the Enugu mines will become more important. Although coking coal will still have to be imported, local coal will be needed for blending. Modernization, which is now taking place, will raise production to 2 million tonnes a year. There are studies taking place, too, after the Kainji experience on the feasibility of a coal-fired power station, and it is possible that coal mines may be developed in other parts of the country.

Exports of coal — some already goes to Ghana railways — is restricted at present by the limited handling facilities at Port Harcourt.

Plenty of options

So far the development of Nigeria's energy resources has been rather hand-to-mouth. The rate of production of oil and gas has been determined by the need for revenue — although some Nigerian economists have argued that production should be held back to a level where the revenue can be effectively absorbed by the economy, and to conserve what is a non-replaceable asset. Rapid economic development in certain sectors has far outstripped internal supply, particularly of electricity, and a patchwork of different types of power stations is rapidly being put together to try and catch up. Supply and demand have not been matched, but at least this disequilibrium is the result of economic activity. In a world where some countries face critical energy problems Nigeria is blessed with a number of options, and the reserves of non-replaceable energy sources are such as to give the country time to plan for the days when they run out. Solar power is just one area that is already being studied, and despite the disappointments of Kainji, hydro-electric power still holds much potential. □ I.P.

PAPUA NEW GUINEA

With its mountainous landscape and heavy rainfall (up to 300 inches a year), Papua New Guinea has a wealth of potential hydro-electric power. Total installed electric capacity was less than 100 MW in 1971, two-thirds supplied by HEP; but studies show there is a potential 15 000 MW available from two rivers alone. Attention is now focussed on the Wabo site on the Purari river, where a recent feasibility study by the governments of Papua New Guinea, Australia and Japan has suggested tapping some 1 700 MW for an aggregate of industries. Under the present four-year budget plan (1978-81), four small and two big hydropower schemes are due to be implemented.

Industrial schemes

The Purari river delta offers a potential 6 000 MW. The Wabo scheme would therefore only be a start, but it is an immense undertaking at an estimated cost of about US \$1 000 m, much less than the GNP. It can only be justified if there is sufficient industrial demand and the search is now on for companies willing to set up in the difficult natural conditions of the area. The recommended industries would be heavy users of power, such as aluminium smelting, copper and zinc refining, and chemical plants, none likely to be viewed favourably by an environmental lobby which has opposed some aspects of the scheme.

It was earlier suggested that Papua New Guinea might supply electricity for nearby Australia. If the Purari delta is to be the national powerhouse there will be considerable difficulties in connecting it up with the mountainous interior, where most of the population live. But these difficulties also apply to the transport of other kinds of energy and it is the government's policy to replace oil-fired power stations by hydro-electric power as much as possible. Small HEP plants have been successfully used to power particular industries, such as fish-processing and sawmills, and although some

population centres are without HEP possibilities (such as the second city, Lae), this major national resource is, on the whole, widely distributed. The concept of the Wabo project is to supply large quantities of cheap energy to power-intensive industries developed among the inhospitable mangrove swamps of the Gulf of Papua coast.

A major challenge

If all goes well, the economic projections over the next five or 10 years are startling. So are the demographic projections, with more than half the country's 2.6 m population under the age of 20. Exploiting its hydro-electric potential is one of this newly-independent country's biggest challenges. □B.T.

TRINIDAD AND TOBAGO

Trinidad and Tobago, two islands which have formed an independent state since 1962 and a republic since 1977, is the best-off of the Caribbean states in this, the oil age. It is, in fact, CARICOM's only major producer/exporter of oil and natural gas.

In spite of a drop in March, production in April this year was high (234 438 barrels, 2 859 barrels less than the previous month). According to the Ministry of Oil and Hydrocarbons, a total of 28 391 803 barrels will be produced in 1978, some 4.3% more than in 1977.

Oil and offshore natural gas deposits (80.6%) account for almost 60% of production overall, daily drilling being 665 m on average.

Some 142 000 000 m³ of natural gas are produced every day (see table on oil and natural gas production since last year and estimates until 1982).

Exports

Crude oil exports in April were 456 000 barrels, about 7.5% less than previous month, but total exports over a 12-month period are 17 636 260 barrels, more than 17% up on the previous period.

Exports of the refined product have also dropped by about 7% to 7 863 670 barrels (see table).

Imports

However, as the table shows, Trinidad and Tobago also imports oil, as its own production does not fill the capacity of its refineries. Crude oil imports in April 1978 were 6 206 500 barrels, roughly an 18% decrease over the previous corresponding period. The main suppliers are Indonesia (31.25%), Angola (10%) and Iran (0.30%). Between April 1977 and April 1978, 22 880 000 barrels of crude oil were refined.

Trinidad and Tobago's whole economy and future depend on the oil resources from which the Port-of-Spain government derives most of its income, primarily in the form of royalties.

But the country still has a serious electric energy problem. It has no major rivers or falls which can be used for HEP and therefore has to use oil in its power stations to produce electricity.

(The implications of oil for Trinidad and Tobago's development will be investigated in a series of articles in the next issue of the *Courier*). □

Production

| Company | 1977 | | 1978 | | 1979 | | 1980 | | 1981 | | 1982 | |
|-----------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|
| | Daily Avg. (Bbl/Day) | Year Total (Mill Bbl) | Daily Avg. (Bbl/Day) | Year Total (Mill Bbl) | Daily Avg. (Bbl/Day) | Year Total (Mill Bbl) | Daily Avg. (Bbl/Day) | Year Total (Mill Bbl) | Daily Avg. (Bbl/Day) | Year Total (Mill Bbl) | Daily Avg. (Bbl/Day) | Year Total (Mill Bbl) |
| Amoco | 132 800 | 48.47 | 122 000 | 44.53 | 112 000 | 40.88 | 102 600 | 37.55 | 94 000 | 34.31 | 86 000 | 31.39 |
| Trinmar | 48 300 | 17.63 | 48 500 | 17.70 | 45 000 | 16.43 | 42 000 | 15.37 | 40 000 | 14.60 | 40 000 | 14.60 |
| Texaco | 21 000 | 7.67 | 21 000 | 7.67 | 20 000 | 7.30 | 20 000 | 7.32 | 20 000 | 7.30 | 19 000 | 6.94 |
| Trinidad-Tesoro | 21 500 | 7.85 | 21 200 | 7.74 | 21 200 | 7.74 | 21 000 | 7.69 | 20 000 | 7.30 | 20 000 | 7.30 |
| Trintoc | 9 200 | 3.36 | 10 000 | 3.65 | 11 000 | 4.02 | 10 000 | 3.66 | 9 500 | 3.47 | 9 500 | 3.47 |
| SEC Consortium | — | — | — | — | — | — | 2 000 | 0.73 | 6 000 | 2.19 | 6 500 | 2.37 |
| Total | 232 800 | 84.98 | 222 700 | 81.29 | 209 200 | 76.37 | 197 600 | 72.32 | 189 500 | 69.17 | 181 000 | 66.07 |

Imports

| Country of origin | April 1978 | | March 1978 | | 1978 to date (estimates) | | 1977 same period | |
|----------------------|------------------|----------------|------------------|----------------|--------------------------|------------------|-------------------|------------------|
| | Barrels | Cubic Metres | Barrels | Cubic Metres | Barrels | Cubic Metres | Barrels | Cubic Metres |
| Ecuador | | | | | | | | |
| Venezuela | | | | | 204 686 | 32 542 | 502 899 | 79 955 |
| Saudi Arabia | 3 642 629 | 579 131 | 2 914 824 | 463 419 | 13 446 398 | 2 137 803 | 11 833 344 | 1 881 348 |
| Iran | 20 466 | 3 254 | | | 708 411 | 112 628 | 6 182 545 | 982 944 |
| Indonesia | 1 939 607 | 308 372 | 2 347 311 | 373 192 | 7 144 467 | 1 135 877 | 6 130 170 | 974 617 |
| United Arab Emirates | | | | | — | — | 175 103 | 27 839 |
| West Africa | | | | | — | — | | |
| Persian Gulf - Dubai | | | | | 154 099 | 24 500 | | |
| Iraq | | | | | 56 829 | 9 035 | 139 575 | 22 191 |
| Angola | 603 747 | 95 988 | | | 1 162 137 | 184 765 | 1 309 763 | 208 235 |
| Total | 6 206 449 | 986 745 | 5 262 135 | 836 611 | 22 877 027 | 3 637 150 | 26 273 399 | 4 177 129 |
| Unfinished Products | — | — | — | — | — | — | 186 564 | 29 661 |

Exports

| | This month | | Last month | | 1978 to date | | Same period | |
|------------------|------------|--------------|------------|--------------|--------------|--------------|-------------|--------------|
| | Barrels | Cubic Metres | Barrels | Cubic Metres | Barrels | Cubic Metres | Barrels | Cubic Metres |
| Crude Oil | 4 561 008 | 725 141 | 4 926 412 | 783 235 | 17 636 262 | 2 803 936 | 15 072 012 | 2 396 254 |
| Refined Products | 7 863 673 | 1 250 222 | 8 448 728 | 1 343 238 | 29 326 826 | 4 662 584 | 30 977 191 | 4 924 971 |

NIGER

Niger makes a curious case history as far as energy is concerned. One of the poorest countries in the world, blasted by drought and cut off from the sea, it is entirely dependent on imported energy—some of it in the form of electricity from the Kainji dam in neighbouring Nigeria, and by far the most part as oil. Yet Niger has a wealth of potential energy sources; it is one of the world's biggest producers of uranium, intense sunshine falls on most of it for 10 hours a day, coal and oil have been found, two hydro-electric schemes are in preparation, a nuclear plant is being considered and there have even been some modest experiments with wind power. As elsewhere, the oil crisis is the economic key to these resources.

Niger's balance of payments has been in the black since 1976 mainly because of the Pandora's box opened by OPEC in 1973. Production of uranium was just getting into its stride the previous year and since then it has quadrupled, while the price has nearly quintupled (in CFA francs). Niger's uranium has so far only been exploited at one site, Arlit, by the SOMAIR company set up 10 years ago. Another mine, underground but of better quality, should come on stream this year at nearby Akouta and in 1981/2 a third at Immouraren and a fourth at Tassa N'Taghalgue. Total reserves (metal) are estimated at more than 150 000 tonnes, of which scarcely 3% has been extracted up to now. This puts Niger in a position somewhat similar to that of the Arab oil states, investing in the future with a glut of cash coming in from a relatively short-lived, non-renewable resource. Much of it will go to the energy sector.

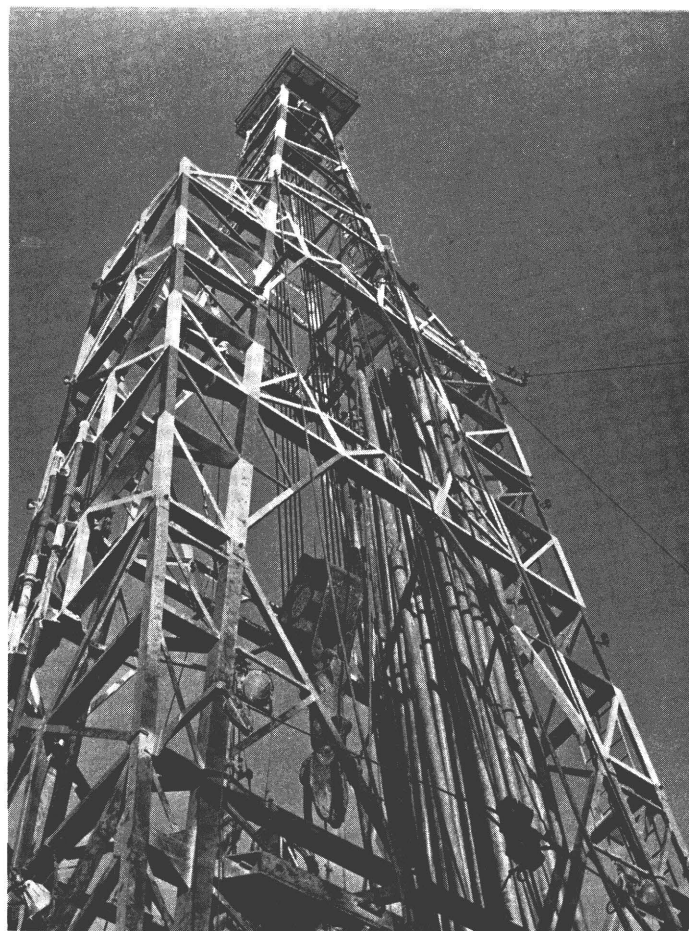
Important role for coal

A first priority will be to mine the coal found by French uranium prospectors at Anou Araren. The seam of around six million tonnes should provide enough energy to work the new uranium mines for 25 years, as well as providing for the nearest big town, Agadez. A comprehensive study is being carried out with Canadian help to make the best use of the coal and a 32 MW coal-fired power station is planned. Production should begin in 1980 and reach 12 000 tonnes of coal a year by 1982.

Oil was found at Tin Touma in 1975. Four consortia of big oil companies have already invested \$6m in prospection, exploration is continuing and by the end of the year it should be known whether or not the strike is economically viable.

There are two schemes to dam the Niger, one at each end of its brief passage through the western edge of the country. The most ambitious is the Kandaji project, for which the feasibility studies should be finished by the end of this year. The options are to use the dam for water management, or for irrigation and hydro-electricity, or for both plus transport. The dam could provide a theoretical 1 500 GWH a year, far more electricity than Niger is likely to be able to absorb before the year 2010, and the lake should provide irrigation for about five times the land currently watered. A third of the population live in this area. One problem is to know how much exploitation the Niger river can take. Mali is thinking of building a dam not far upstream, and the two would appear to be incompatible.

Niger is a natural candidate for solar energy and set up its own research and development outfit in 1965, ONERSOL.



The stark silhouette of a drilling rig in the Niger desert

This is still a very small team but they are financially supported by several countries. While their research section is working on prototype solar engines and ovens, ONERSOL's success in selling water-heaters and distillers (100 or more buildings have been equipped) has persuaded the government to provide a factory to supply this promising market. The 850 m² factory, equipped with modern, high-output machinery, is the first of its kind in the region. Production of 1 000 water-heaters a year is planned and other lines, such as flat-plate collectors for solar pumps, will be developed as they come off the ONERSOL drawing-boards.

Experimenting with solar power

The EDF is also financing work on solar pumps as part of two irrigation schemes, at Karma and Tabalak. These are admittedly experimental, but when they come into operation next year they should prove convincingly that solar energy is no flight of fancy. Niger has also been a successful pioneer among the ACP countries in providing education by solar-powered television.

In this desert country, anything that can replace the wood and charcoal on which most of the rural population depend will help stop the desertification process that has decimated the Sahel. Power stations are of little use to widely-scattered villages, but coal and maybe solar energy should help save some of the remaining vegetation. □

B.T.

The CEAO

by Roger NIKIEMA(*)

The Communauté Economique de l'Afrique de l'Ouest (West African Economic Community) has organized a number of meetings on energy problems within the community in the last 12 months. The first was in Nouakchott, where a colloquium on geology, minerals and oil was held last October. Then, in February, there was the first meeting of an advisory committee responsible for looking into the problems of opening a CEAO school to train cadres for mining, geology and the cement industry. It was to include a department of hydrocarbons. This preceded the constituent meeting of the Standing Committee on Energy, in Abidjan in March, which was to find community solutions to the problems of energy supplies in the countries of the CEAO.

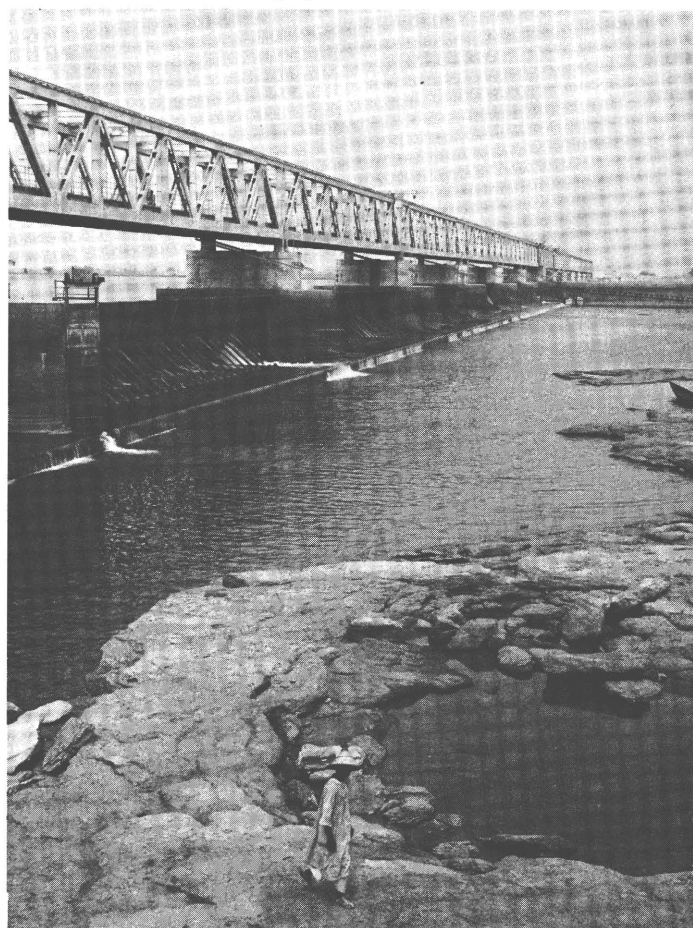
This sustained effort was a response to:

— The constantly worsening oil crisis, which was an incentive to finding lasting solutions.

— The fact that energy is a necessity not just for the urban centres and the industries there but for rural areas as well. In the space of 15 years, the members of the CEAO have seen their consumption of hydrocarbons quadruple from nearly half a million t in 1960 to more than two million in 1974.

(*) Head of CEAO information services.

Sanssanding hydro-electric dam (Mali)



— The increasing scarcity of firewood (of which some 400-700 kg per person per year are required), which further accentuates the rising price of hydrocarbons.

Clearly energy is an important factor in the development of the sub-region and the CEAO must solve the problem if it is to achieve its main aim of economic integration. The need is all the more urgent in that the CEAO countries are in a situation of what is sometimes total dependence on the oil-producing countries and the burden is particularly heavy in view of the surge in crude oil prices since 1973. Then, according to the ECA, there are only minimal conventional sources of energy in the sub-region (8 000 MW in West Africa as against 200 000 in the continent as a whole. These countries cover vast areas and their populations are widely spread, which considerably aggravates the energy transport problem.

Considerable efforts have been made at national level to meet development needs. The maritime countries have built refineries at Abidjan, Dakar and Nouakchott with a capacity of something like four million t p.a. for a global consumption of more than three million t p.a. Two landlocked countries, Mali and Upper Volta, get all their supplies through Senegal and the Ivory Coast. Mauritania gets 30% via Senegal and only Niger has supply circuits with connections outside the CEAO. There is a continual search for oil and for suitable HEP sites in all the countries. Great strides have been made with research into and exploitation of fissile matter and Niger leads the field here.

Finally, the CEAO countries have made an enormous effort as regards research into and popularization of new forms of energy, particularly solar energy, and have set up specialized national development bodies like ONERSOL (Niger's solar energy board), the solar energy laboratory at Bamako and the Institute of Meteorological Physics at the University of Dakar.

The CEAO's energy policy is a global one and emphasis is as much on research into and use of conventional energy as on the popularization and use of new forms.

Conventional energy — bringing dangerous dependency to an end

The aim of the standing committee on energy in Abidjan last March was to propose solutions for the supply, distribution, buffer stocks and emergency procedure in the event of interrupted supply to the CEAO Council of Ministers. It also set up oil companies in the CEAO and harmonized national laws and regulations on the supply and distribution of petroleum products.

The conclusion was that "we shall always suffer the effects of decisions that are out of our hands... everything must be done to see that our countries, as consumers, gradually come to present a united front to the outside world until such time as our own potential, which is already promising, puts paid to this situation of perilous dependency." The proposed action is both political and economic.

Politically, the oil companies will to have adequate storage capacities to cope if supplies should be cut off and the sector must be controlled by large holdings in the distribu-

tion companies. A considerable effort has been made in distribution and the networks now belong to local branches (subject to local law) of the major international companies, which has made it easier for the states involved to follow the clear recent trend of buying shares in them. The Ivory Coast government, for example, now holds 50% of shares in BP and Shell and, in Upper Volta, the law on the Voltaization of trading companies will soon mean that 51% of the distribution networks are under government control.

The Senegalese government, in association with the Iranian NIOC, has obtained a 51% holding in Shell and the Mauritanian government has gone further still, the SNIM having simply bought up the whole of the Shell network.

Still in the political sector, one of the recommendations of the advisory committee which met in Ouagadougou in February this year was that the CEAO should join with regional and national development bodies to look into the problems of financing the research and exploitation of oil and mineral resources, and of the on-the-spot industrialization and processing of these resources.

The CEAO training school for cadres in the mining, geology and cement sector (including a department of hydrocarbons) is also part of the political plans. It should be opened shortly and will provide five-year post-baccalaureate training courses, producing 40 engineers and 60 technicians every year.

Moussa Ngom, CEAO Secretary-General, has made it clear that steps will be taken promptly to speed up the construction of this community structure, which is so vital if underground resources are to be fully exploited and brought under control.

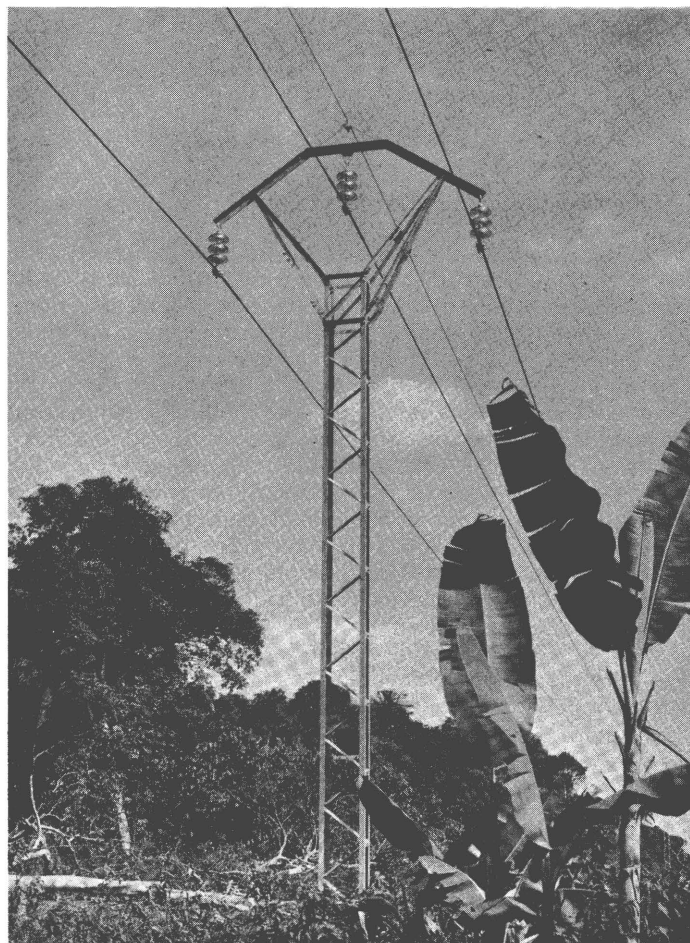
It was the standing committee on energy which put the greatest emphasis on the economic aspects of the community's attempts at meeting the members' energy needs by concentrating on infrastructure, standardization of taxes and holdings.

The experts drew the authorities' attention to the need to improve transport infrastructure and equipment to avoid the interruption of supplies. In future, the tax standardization problem should be thoroughly investigated at both national and community level and a solution found which takes account of the profits made by the oil companies.

Supervision and control of the hydrocarbons sector should theoretically lead to the states obtaining holdings in all oil (refining and distribution) companies. The experts on the standing committee go so far as to hope that each member of the CEAO can control at least 51% (capital and management) of its hydrocarbons sector.

Developing local resources

The use of domestic resources, solar energy in particular, is one of the basic elements of the CEAO's energy policy. In 1976, less than two years after it was formed, the community organized a meeting in Bamako to seek ways and means of rationally exploiting "our domestic resources, particularly the inexhaustible supply of solar energy throughout our region". The CEAO has made itself well-known through its work on solar energy via ONERSOL (Niger), Mali's solar energy laboratory, the Institute of Meteorological Physics at the University of Dakar (Senegal) and the Inter-state School of Rural Engineering in Ouagadougou (Upper Volta).



Electricity links help make regional cooperation a reality

A desire for self-reliance

The CEAO's main contribution here, apart from providing incentives for various existing centres, has been to set up the *ad hoc* committee on solar energy, due to be institutionalized by the organization's next conference of heads of state. Its main function will be to set up research centres in any CEAO members without them.

The community will be asking CAMES (the African and Malagasy Council on Higher Education) to carry out a study for a programme based on solar energy but also covering general energy problems and how they can be fitted into the national school and university syllabuses. The secretariat has already awarded 12 grants (two per country) for research into solar energy and management of solar energy centres and three researchers from Mali and Mauritania are now preparing doctoral theses on solar energy in Perpignan (France) and one from Niger is studying ONERSOL management at the University technical institute in Ouagadougou. In accordance with the *ad hoc* committee's recommendations, the community industrial development board will compile and keep up to date an index of all new technology plus information on research being carried out throughout the world into new forms of energy.

The fact that the CEAO is concentrating on its own resources in its attempts at both controlling the energy sector and integrating the sub-region is particularly significant. This idea of self-promotion is new in Africa, where inter-state organizations have always tended to be singularly dependent on external aid with their development programmes. □

R.N.

EDF aid for energy

Under the first EDFs, aid to the energy sector was rather limited and was generally bracketed with infrastructure or industrialization. Expenditure on the 19 Yaoundé Convention countries in this area up to the start of the Lomé Convention (February 1975) amounted to some 38 million units of account, including surveys.

Most of this went on building electricity lines in Rwanda and Zaïre. The biggest single commitment was 19.4 m u.a. to Zaïre to cover a 400 km network feeding power from the immense Inga dam to Kinshasa, to the ports of Bomo and Matadi and into the national grid. In Rwanda it has been more a question of constructing a national grid. From 1962 on, 15.4 m u.a. went into this, to provide power from a station built under earlier cooperation schemes and to finance studies on new stations at Mukungwa and on the Ruzizi. The Rwandan projects were part of a regional cooperation scheme that had then been running for 10 years and also involved Zaïre and Burundi, the idea being that these Great Lakes countries share a natural watershed — the basin of the Nile and Zaïre rivers — suitable for hydro-electric development.

Further EDF aid went to power stations in Cameroon, Burundi and Mali (a study for the Sélingué dam), the Cameroon investments being coordinated with European Investment Bank capital (7.5 m u.a.) for three dam schemes.

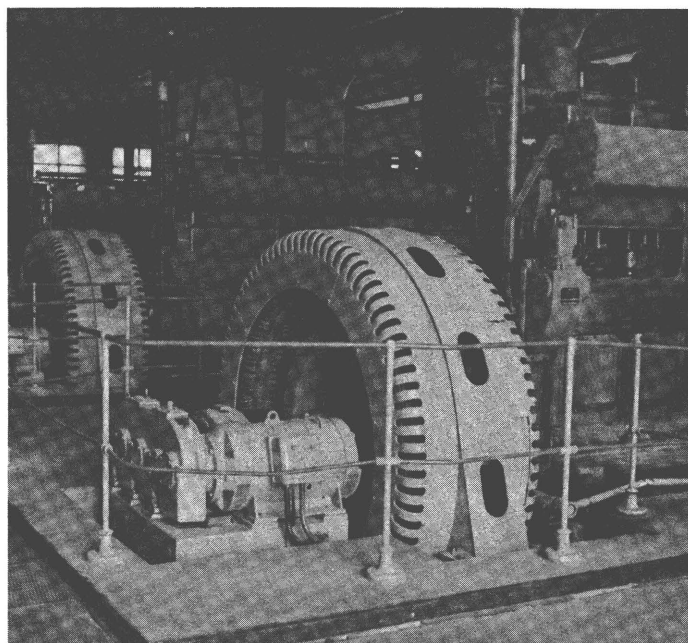
Otherwise, aid to the energy sector under the first three EDFs covered such smaller operations as providing power plants for factories (oil-pressing in Niger, textiles in Upper Volta, various factories supplied by the Garoua power station in Cameroon), miscellaneous infrastructure schemes (e.g. electricity for a tourist complex in Mauritania) and some back-up for farm projects (e.g. power for irrigation pumps in Togo).

Up to 1975, EDF expenditure in the energy infrastructure and production category is listed as follows:

('000 EUA)

| | | |
|-------------|--------|------------|
| Burundi | 425 | EDF 2 |
| Cameroon | 724 | EDF 2 |
| Mali | 24 | EDF 2 |
| Niger | 398 | EDFs 1 + 3 |
| Rwanda | 15 386 | EDFs 2 + 3 |
| Upper Volta | 1 373 | EDF 2 |
| Zaïre | 19 400 | EDFs 2 + 3 |
| | 37 731 | |

Under EDF 4, launched after the oil crisis, energy projects have taken on a new importance and been wider spread among the ACP countries. An independent report estimates that by the end of last year, more EDF 4 funds had gone to industrialization than to any other sector, primarily to increase energy supplies. The new schemes involve both conventional and non-conventional energy; the second category is of particular interest and these projects are described in the separate article which follows.



The power plant in the Garoua spinning mill (Cameroon)

Conventional energy projects under EDF 4 include the following commitments (as of 1 May 1978); several also include irrigation schemes:

| | | '000 EUA | |
|----------------------|--------|--------------------------------|------|
| Burundi/Rwanda/Zaire | 1 200 | Ruzizi II HEP scheme (study) | |
| Ghana | 8 980 | Kpong Dam (see box) | |
| Kenya | 26 340 | Upper Tana Reservoir scheme | |
| Malawi | 8 500 | Nkula II HEP project | |
| Mali | 19 157 | Sélingué Dam | |
| Rwanda | 20 000 | Mukungwa HEP station | |
| | 3 900 | Kigoma-Mururu HT line | |
| Sierra Leone/Liberia | 2 369 | Mano River HEP scheme (study) | |
| Western Samoa | 2 353 | Magiagi Dam | |
| | 487 | Upola HEP project (studies) | |
| Zaire | 155 | HEP for tea processing (study) | |
| | 93 441 | □ | B.T. |

The Kpong hydro-electric dam (Ghana)

an example of cofinancing in the energy sector

This project should enable Ghana to cover all its energy requirements up to 1985. The hydro-electric station will be supplied by a reservoir that will also provide irrigation for 6000 hectares.

The EDF will provide a soft loan of 9 m EUA, the EIB a loan of 10 m, 65 m will come from Arab funds and the rest of the total cost of 213 m EUA will come from the IBRD and Canada.

Alternative energy for the ACP countries

The recent oil crisis and the prospects of an energy crisis in the next 20-50 years clearly make it necessary to analyze the solutions that could effectively be applied to the developing countries, either individually or collectively.

In this context, the new, so-called "alternative" forms of energy can no longer be ignored.

It may be useful to start with an outline of the Community's means of action in the developing countries and see what the Commission has actually achieved in the energy sector.

Under the Lomé Convention, the Commission is able to promote new techniques for which pure and applied research has been completed, which meet genuine needs in the ACP countries and which are adapted or easily adaptable to conditions there. They must also be reasonable economic propositions and of clear social interest. In cases of this kind, the EDF can and must provide aid:

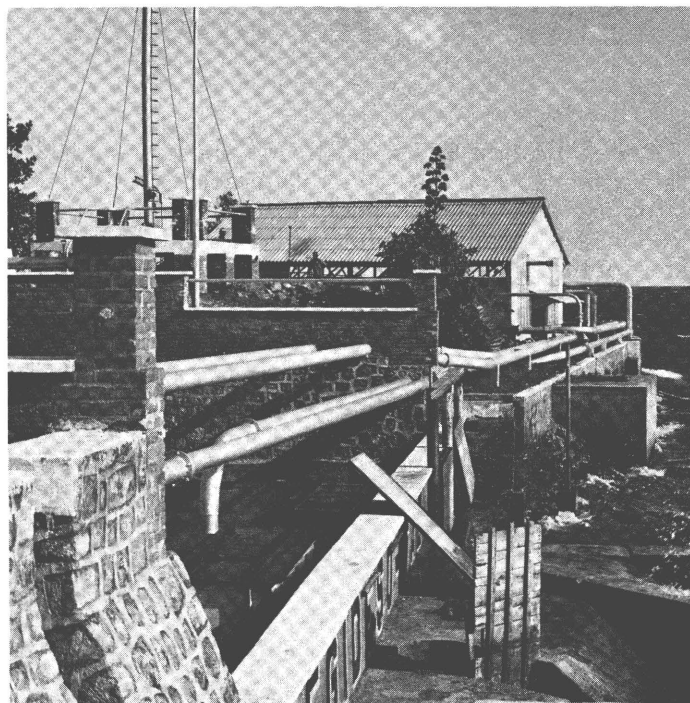
- either via financing for projects, part of which involves techniques that are new but sufficiently well-developed for the risks to be limited;

- or as a means of industrial cooperation, as defined in the Lomé Convention (in particular, in the articles on the transfer of technology, the promotion of its adaptation to conditions in the developing countries, and the development of ACP research, adaptation of technology and industrial training).

This is a field where EEC-ACP cooperation can be particularly fruitful to all concerned and it should be tackled in a dynamic and effective manner. The criteria for implementation of EDF projects in the narrower context of alternative forms of energy in the ACP countries, and particularly in arid regions which generally have no supplies of conventional fuel, become clearer every day.

Generally speaking, each project involved in financial and technical cooperation is examined with a view to detecting any possibility of including solar energy equipment, wind power or energy-saving techniques. The last point is often neglected — wrongly, since the rational management of existing installations and improved energy efficiency could save up to 50% of the fuel currently consumed.

The projects in which alternative energy systems have been used involve agricultural irrigation, water supplies,



This experimental station at Gisenyi (Rwanda) is tapping methane from the bottom of Lake Kivu

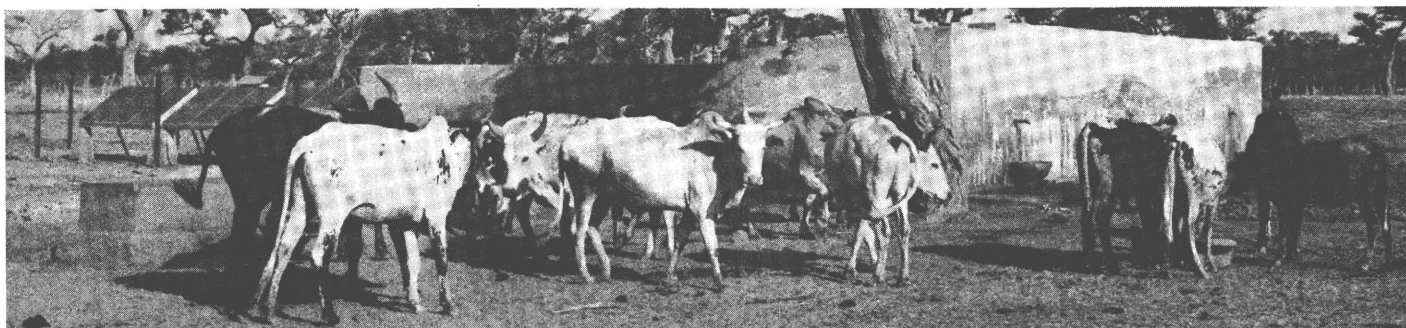
telecommunications, housing, electricity supplies and, generally, any projects where a fairly low power output (1-50 kW) is called for. The Commission's role here is only to advise the national authorities in charge of the projects; the final decision as to the suitability and choice of the suggested equipment always rests with the ACP countries.

In view of the EDF's project assessment rulings, the choice of solution always depends on the technico-economic and social aspects. However, the Commission is willing to accept a certain obvious risk attached to using techniques that have not been fully tested in the field.

Special attention is paid to rural development projects. The advantage of using alternative energy (e.g. solar energy or wind power, is that it is well suited to village communities, which are usually scattered and do not need large amounts of energy.

So far, the EDF has run the following schemes involving alternative forms of energy:

- Mauritania — project to irrigate small rice-growing areas in the Senegal valley. Installation of a 10 kW solar pump with heat storage for 10 hours out of 24 to irrigate an area of 20 ha. Cost: 475000 EUA. Scheduled to come into operation in December 1978.



Solar energy pumps water for cattle in Mali (see solar panels on left of photo)

— Malawi — project to construct and equip the Mangochi and Nsahje district hospitals. Solar energy to be used to heat water in the sanitary blocks. Cost: 100000 EUA. Scheduled to come into operation at the end of 1979.

— Togo — two solar pumps with 0.9 kW photovoltaic cells to be installed on boreholes as part of a village hydro programme. Cost: 80000 EUA. Scheduled to come into operation at end 1979.

— Comoros — ongoing study on supplying electricity by combination of photovoltaic cells and aerogenerator — some 300 W power.

— Barbados — projected study of air conditioning for an agricultural research centre included in the indicative programme.

— Niger — water-heating scheme for rural housing planned in the Badiguischeri department.

— Upper Volta — solar power station at Dori to produce 370 kWh per day planned as part of a project to supply electricity to secondary centres. Cost: 1000000 EUA. Scheduled to come into operation in 1981.

— Upper Volta — ongoing feasibility study on using molasses from the Banfora sugar works (production of alcohol as a substitute fuel for firewood).

— Cameroon — project to create irrigated areas in the Logone and Chari departments could involve a 5 kW solar pump to irrigate 10 ha of rice crops. Cost: 311000 EUA. Scheduled to come into operation at end 1979.

Another approach to these development problems is directly supplied by those ACP states which decide to allocate part of what the EDF gives them to alternative energy research and application schemes. For example, a request from the Niger government on experimenting with solar motors and pumps is being covered by EDF 4 and stage one of this involves two medium (5 & 10 kW) solar pumps being installed on irrigated cropland. The operation will cost 550000 EUA and is scheduled to begin functioning in September 1979.

It is worth noting that this project in Niger involves the active participation of ONERSOL, which will be responsible for manufacturing the collector plates and supervising the assembly of the whole installation.

Later on, the EDF will be providing 550000 EUA to perfect a solar motor designed by ONERSOL.

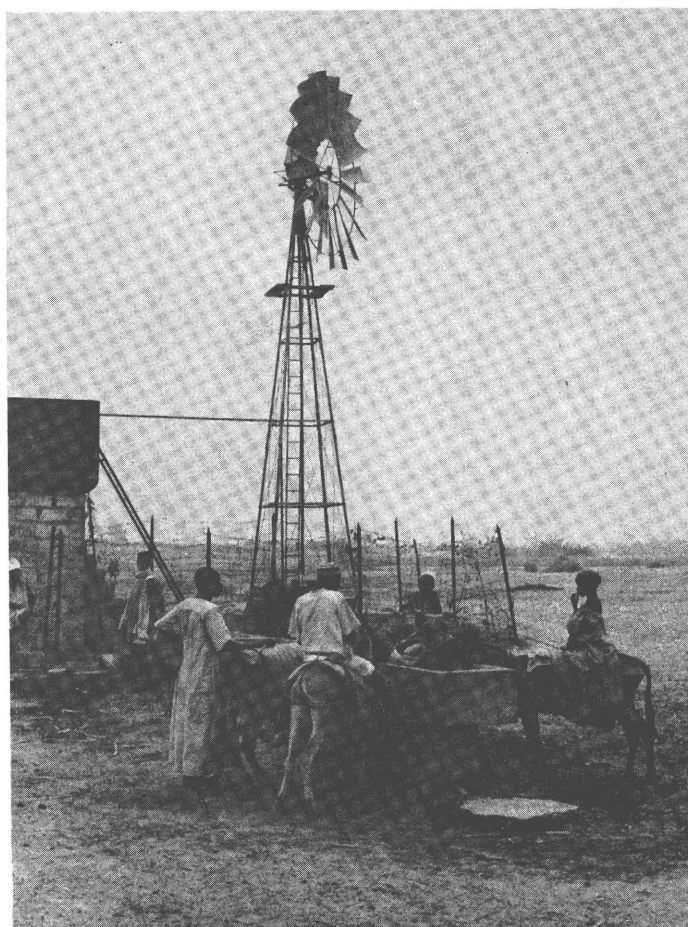
There is one other means of action, mainly intended to help with the development of rural areas and warranting particular attention in implementation of the Lomé Convention. It is the system of micro-projects which is so eminently suitable for the schemes involving alternative energy.

Experience has shown that small, isolated projects can be of considerable importance for development because:

- they enable the basic community to find solutions for its particular problems which large projects often overlook;
- they encourage the local population to take part in the design and execution of development schemes;
- small projects are easy to adapt and therefore lend themselves to gradual extension;
- they involve a considerable percentage of the local labour force, goods and national services.

We feel that the system of micro-projects, which can cover a variety of types of schemes, should make it easier for rural communities to adopt alternative sources of energy. If progress is to be made in this particularly useful direction the authorities responsible must be genuinely concerned with contributing to a joint effort.

This sort of approach can also be envisaged as part of cooperation with NGOs and of financial and technical aid with non-associated developing countries. In these cases the projects submitted to the Commission are often more difficult to work out because cooperation with the people involved is much less comprehensive than with the ACP authorities. The Commission has nevertheless agreed to



Herdsmen in the drought-hit area of Kano (Niger) depend on the wind for water

provide partial financing for three solar pumps (photovoltaic cells) which were successfully installed in Mali in June 1977 as part of an NGO hydro/rural development scheme. The cost is 115000 EUA, 50% of which is being financed by the Community.

Other similar schemes are planned for Senegal (two 1 kW solar pumps), Mali (five 1 kW solar pumps and water and electricity supplies to one hospital), Chad and Rwanda (production of methane by anaerobic fermentation).

These are modest results, doubtless because of a failure to recognize the genuine possibilities which alternative forms of energy can now offer.

However, the enthusiastic interest in the projects which we have financed over the last few months shows that there is a change in the air. It is a good time to have a look at what has been done so far and check that we are going about promoting these new kinds of energy in the right way.

As solar energy deserves particular attention, the Commission of the European Communities is planning a conference — "Solar energy in development" — for March next year, in Italy. It will serve as a preparatory meeting before the UN conference on science and technology in development, and, coming at an early stage in the new EEC-ACP negotiations, should make it possible to define the main lines of an action plan for developing solar energy in the Third World.

Representatives of all the developing countries interested in solar energy, especially the ACP group and those of the southern Mediterranean, should be present at the conference, which will aim at drawing up recommendations for local authorities, financing organizations, research scientists, industrialists and consulting engineers as well as the people likely to be using the new solar technology. □

PIERRE LEQUEUX

FAO



Locusts — cloud of destruction

Experts in locust control are on the war path against some 50 swarms of locusts covering more than 2 000 km² in the Horn of Africa. The mass reproduction of these insects, which belong to what is commonly called the grasshopper family(1), has been encouraged by regular and abundant rainfall since October of last year in the regions along the Red Sea and the Gulf of Aden. Control, the experts' euphemism for extermination, is difficult because of the political situation in the area. The detection and monitoring teams were not allowed into the strategic regions and this has created the worst situation

(1) Although both words tend to be used indiscriminately, the locust (*Schistocerca gregaria*) and the grasshopper come into different categories. Both are insects of the order *Orthoptera*, but the locust belongs to the class *Oaelifera* (family *Acrididae*) and has short antennae and an internal ovipositor, whereas the grasshopper belongs to the class *Ensifera* and has long antennae and an external ovipositor.

since the last great invasion in India in 1962 when 4 000 ha of cotton were wiped out. Now the whole of north and north-east Africa, the Sahel and the middle east is living under the threat of these insects which are swarming and ready to launch further assaults on crops.

A constant threat

For thousands of years, locusts have attacked the crops of some 50 countries. More than one fifth of the world's population, occupying 30 million km² and with an annual agricultural production worth \$20-25 000 million, is under the constant threat of losing its means of subsistence.

The figures are unimaginably large. One swarm may cover 100-400 km² and have as many as 200 insects to the m². Swarms of 40 000 million locusts,

weighing 80 000 t are not uncommon. Each insect eats its own weight (2 gr. in the case of adults) in food every day and so a tonne of them will eat as much (greenery and soft bark) as 250 humans every day. A swarm travels about 70 km every day and may cover 3 000-5 000 km in a season. The female lays about 500 eggs and a general rate of multiplication of 300 would be no exaggeration.

A plague from the skies

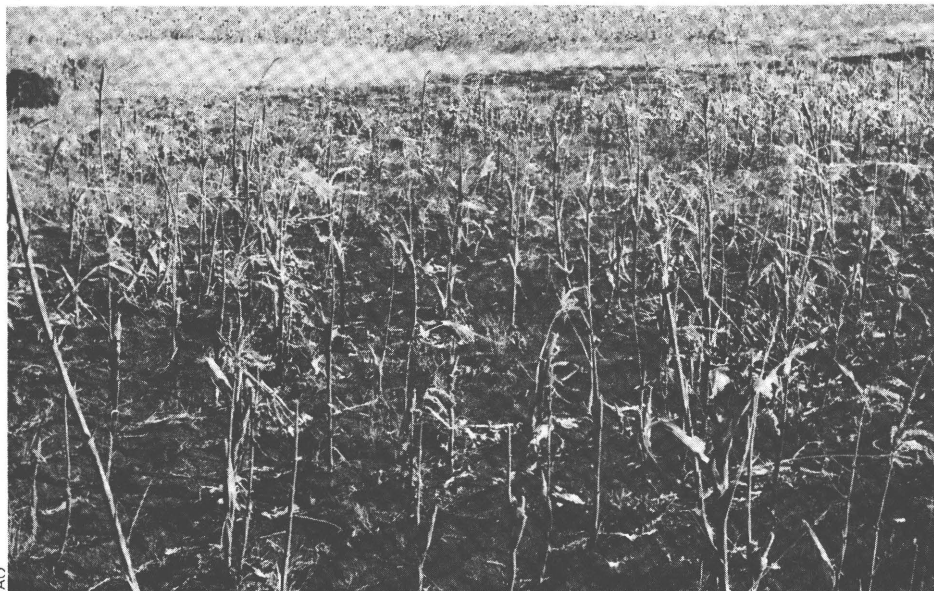
The damage wrought by these insects is such that even the most ardent ecologists are convinced of the need to control them. According to the FAO, they caused overall losses of \$100 million p.a. between 1954 and 1960. Here are one or two striking examples: in the winter of 1954/55, they destroyed \$13 million worth of crops in Morocco in six weeks; in 1957, 16 000 t of millet and 2 000 t of other crops were wiped out in Senegal; in 1958, they devoured



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(Top left): locust swarms may count 200 insects per square metre

(Top right): having stripped their bed, locusts settle down in it for the night

(Opposite): all that remains of a maize field after the locusts have gone

(Below): two of the main ways of fighting locusts spraying insecticide by air (in Morocco) and by specially-equipped vehicles (in Ethiopia)



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167 000 t of cereals in Ethiopia, enough to feed a million people for a year.

Analyses of more than 2 000 invasions reveals that it is immature adults that cause the most damage (69%), the rest being caused by mature adults (23%) and larvae (8%).

Gone with the wind...

The damage is caused by locusts which swarm when climatic conditions (humidity and heat) are such that a population explosion occurs. In the present case, the cyclone which brought abundant rainfall last autumn also helped the insects to gather. The wind plays a considerable part in swarming and migration. Humidity, which is necessary for mass reproduction, also enables plant life to develop, thereby providing staple food. The swarms currently being tracked by the monitoring teams (on the basis of extrapolation in the strategic non-accessible regions) are small or medium-sized but are already more than three generations old (the insects live anything from 32 days to 8 weeks). If the swarms in the Horn of Africa grew more or joined forces, it might well no longer be possible to control them. Vigorous and timely methods of control, such as carried out on the Arab peninsula, can in fact prevent mass reproduction and swarming.

Methods of control

As Mr Gill, one of the members of the small unit in charge of coordinating international locust control in the FAO since 1952, explained to us, control, properly speaking, is the job of the national governments. But the very nature of the migratory plague means that there must be intensive regional cooperation as well as the international coordination run by the FAO. So, five regional groups of countries have been formed according to geographical zone. They are West Africa, North-West Africa, East-Africa, the Middle East and South-East Asia.

In recent decades, Mr Gill suggests, there has been a change of heart on the part of the authorities in the countries subject to these invasions. "More than 20 years ago, some countries thought the problem was over once the last swarm had left their territory, but, today, everyone has realized that there is a need for effective control, particularly since the damage caused by swarms in the rural sector has considerable repercussions on the economies



A young locust dries its wings in the sun

of what are usually poor countries which already have a food shortfall".

Control techniques vary widely according to type of ground, size of swarm, availability of equipment, labour and qualified technicians etc. Thus, in areas where there is plenty of labour, a common system is to dig ditches to catch the very young, wingless insects which migrate on the ground and exterminate them with a small amount of insecticide or a good fire.

But since swarms tend to cover vast, sparsely populated areas, another method of control has to be used, as Mr Gill explained. "We don't attempt to kill individual locusts. Instead we try to establish longer-term (2-3 months) control over as wide an area as possible by spraying strips of vegetation with insecticide. This presents no real danger to either humans or animals and the scientists have proved that the effects disappear fairly quickly. Moreover, the same ground is normally only sprayed once.

The vast areas under invasion are sprayed from planes or motorized vehicles. In the latter case, an ingenious nozzle added to the vehicle's

exhaust, enables the insecticide to be sprayed finely over the vegetation.

The fight continues...

The potential damage of another migration on the scale of that of 1962 means that the anti-locust campaign must be constantly waged in all affected areas and this obviously poses logistic problems since swarms are always on the move". Mr Gill also emphasized the problem of training qualified technicians, as they easily find better paid work elsewhere. The FAO has launched an appeal to the countries in the Horn of Africa to get them to help provide effective control over the regions where the swarms are concentrated. In addition to the political problems of the area which have greatly contributed to the seriousness of the locust scare, most of the countries actually concerned or living under the threat of massive invasion depend on subsistence agriculture to feed the majority of their populations.

If the locusts are allowed to attack, African countries from Tanzania to the Sahel will have their economies seriously affected and their people face famine. □

R.D.B.

APPROPRIATE TECHNOLOGY

Alternatives to a hot tin roof

One of the greatest needs in developing countries is for low-cost housing. Corrugated, galvanized iron makes a good roof, but it is expensive. Here are two cheap alternatives.

Straight to work on the basics this time with a do-it-yourself way of putting a roof over your head.

The method consists of splitting logs to make roof tiles. The technique is traditional in the forest areas of Europe, from northern France to the USSR, and in central and southern Africa. The result is practical, cheap and attractive.

What you need is unseasoned logs, between 50 and 80 cm (1 ft 8 ins — 2 ft 8 ins) in both length and diameter; a mallet; some metal wedges and a splitter (see diagram).

The first step is to split the log lengthways down the middle. Place the wedges accurately across the diameter and bang them in until the log splits into two half-cylinders. Repeat the operation until it has been split into quarters or eighths.

These bits of log are now wedge-shaped. Take the splitter, place it one third of the way in from the sharp edge

of each chunk and cut down the length.

The blunted wedges are now ready to be cut into tiles (the correct word is shingles, or "shakes" as the Americans call them). Position the splitter ready to cut down the grain, a little way in from the side of the chunk. The distance depends on how thick you want your tiles. Note that they will be slightly thicker at one edge than at the other. Tap the splitter into the wood, lever it apart, put something into the gap to hold it open if necessary, and carry on until you have split off the shingle.

Keep going until you have enough. That's all there is to it.

The shingle should be left to weather in the sun before being nailed up to make an overlapping roof. In the favourable climate of Norway such pine shingles are still in use on churches that are more than 700 years old.

Another way of making a good cheap roof requires machinery and some chemicals. The raw materials is fibrous agricultural residue (e.g. rice straw). The method involves making pressed sheets of fibre, mixed with chemicals and painted. The result is practically as strong and durable as corrugated galvanized iron, and much cheaper.

Trials on this corrugated roofing board are being carried out by an

American research organization, using bagasse (the waste from sugar cane), in Jamaica. There are four basic stages to the process.

First, the vegetable material has to be treated to separate out the fibre. It is chopped up in a hammermill, sieved, winnowed and then soaked and beaten into a suitable pulp.

The cleaned fibre is then mixed with a small amount of phenolic resin binder and wax emulsion to improve water resistance.

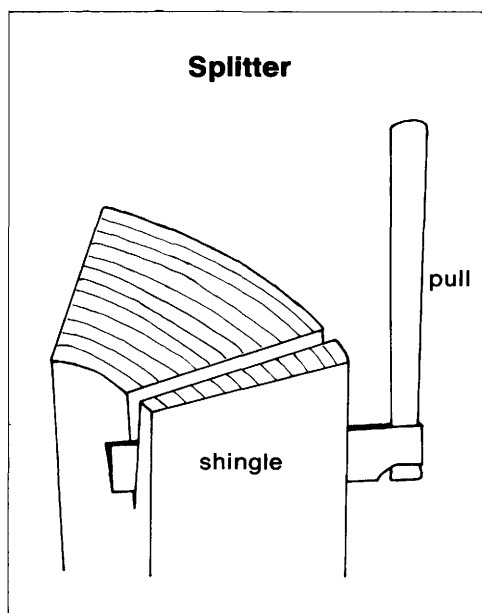
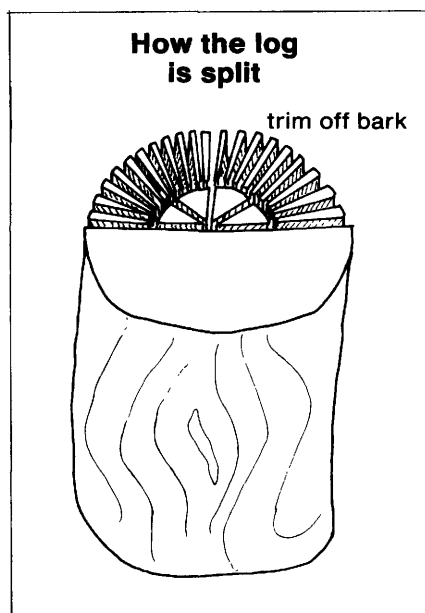
Here comes the ingenious part of the process. The slurry of fibre and chemicals is poured into a spin dryer. The spin dryer not only presses out most of the water and shapes the mixture into a mat of paste, but also aligns the fibres through centrifugal force to give strength (orientation) to the material.

The fibre mat is carefully removed from the dryer drum and sandwiched between screens for pressing in a steam-heated press. It emerges after a few minutes, three or four times lighter, one eighth of an inch (3.2 mm) thick and nearly as strong as corrugated iron.

Finally, the board is trimmed, treated with asphalt sealer and given a coat of aluminized paint. Further treatment (e.g. for fire resistance) can be applied, depending on cost. A vacuum-pressure treatment with a special asphalt will make a board which, when soaking wet, is stiffer and stronger than the dry, untreated board.

This CORB (corrugated oriented roofing board) process comes into the small-scale industry category and clearly offers economies of scale. A CORB plant could be incorporated into a sugar mill, for instance, or operated at community level. A number of governments and development organizations are interested in it and programmes have been initiated to establish demonstration plants in several regions of the world. Building panel plants using rice straw, coconut husk fibre, bagasse and grape vine clippings have been proposed. □

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Development aid from the OPEC countries

Only 10 OPEC countries (Algeria, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the Arab Emirates and Venezuela) give development aid and so the other members (Indonesia, Ecuador and Gabon) are not included in the statistics quoted here, which are from the most recent OECD (DAC) survey.

Volume of aid

OPEC countries have been giving large quantities of aid only since oil prices quadrupled. Prior to 1973, their contributions to development were more or less confined to the aid which the Gulf states gave the other Arab countries, particularly those sharing a

border with Israel. Table 1 gives the trends in the situation since 1973. Note that, after substantial increases between 1973 and 1975, official development aid from OPEC members dropped by some \$200 million, reaching \$5 300 million in 1976, but returning to the 1975 level in 1977. Total commitments were \$9 000 million in 1977 as against \$7 900 million in 1976. But in spite of this new increase, the longer-term prospects suggest that there will be a tendency to decrease again.

Expressed as a percentage of GNP, the financial contributions of the member countries of OPEC exceed the 0.7% target fixed by the UN for official development aid and the 1% threshold for total contributions. Note that the OPEC countries do not consider them-

selves as bound by these targets which, they feel, only apply to the industrialized countries. Table 2 gives the trends in recent years.

The volume of aid supplied by the OPEC members varies considerably, not just in the light of their resources, but according to their own development needs as well. So, sparsely populated countries with a small capacity for absorption (Saudi Arabia, the UAE and Kuwait) are among the largest donors in the world (2nd, 6th and 11th respectively in terms of absolute value) but those with urgent, large-scale development needs of their own (Algeria, Nigeria and Venezuela) give far less both as far as volume and percentage of GNP are concerned. A table of the contributions of OPEC members is given at the end of this article.

Aid channels

At first, the OPEC countries showed a clear preference for bilateral aid. However, multilateral aid increased yearly to reach 25% of commitments in 1976. This multilateral aid is mainly channelled to bodies which are fully OPEC-financed or to new international institutions in which the OPEC countries have acquired greater influence than in traditional ones, such as the International Fund for Agricultural Development.

OPEC countries finance at least a dozen multilateral funds, most of them solely for Arab countries, although one or two with wider fields of action. Examples here are the special Arab fund for aid to Africa managed by ABEDIA and the Islamic development bank. The most recent of these funds is the OPEC special fund, open to all developing countries except OPEC members, which gives priority to the most seriously affected countries (UN list of 45).

Table 1
Financial contributions to the developing countries

| | 1973 | | 1975 | | 1976 | | 1977 | |
|--------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | \$ million | % of total | \$ million | % of total | \$ million | % of total | \$ million | % of total |
| Total contributions (net) | | | | | | | | |
| DAC countries | 24 628 | 89.3 | 40 378 | 81.4 | 40 505 | 82.5 | 43 701 | 81.8 |
| OPEC countries | 1 740 | 6.3 | 8 163 | 16.7 | 7 955 | 16.2 | 9 000 | 16.9 |
| State trading countries | 1 220 | 4.4 | 840 | 1.9 | 620 | 1.3 | 700 | 1.3 |
| Total | 27 588 | 100.0 | 49 381 | 100.0 | 49 080 | 100.0 | 53 401 | 100.0 |
| Official development aid (net) | | | | | | | | |
| DAC countries | 9 351 | 79.4 | 13 585 | 68.5 | 13 665 | 70.1 | 14 759 | 70.8 |
| OPEC countries | 1 308 | 11.1 | 5 512 | 27.7 | 5 331 | 27.2 | 5 500 | 26.3 |
| State trading countries | 1 120 | 9.5 | 750 | 5.8 | 545 | 2.7 | 600 | 2.9 |
| Total | 11 779 | 100.0 | 19 847 | 100.0 | 19 541 | 100.0 | 20 859 | 100.0 |

Table 2
Financial contributions from the countries of DAC and OPEC as % of GNP

| | 1973 | | 1975 | | 1976 | | 1977 | |
|--------------------------------|------|------|------|------|------|------|------|------|
| | OPEC | DAC | OPEC | DAC | OPEC | DAC | OPEC | DAC |
| Total contributions (net) | 1.88 | 0.79 | 4.01 | 1.05 | 3.28 | 0.97 | ... | 0.93 |
| Official development aid (net) | 1.41 | 0.30 | 2.70 | 0.35 | 2.20 | 0.33 | ... | 0.31 |

Geographical distribution of aid

Aid from the OPEC countries is highly concentrated and shows a marked preference for the Arab countries. In 1976, 71% of total aid went to just five countries (Egypt, India, Jordan, Pakistan and Syria) and 64% to Arab countries. However, it should be noted that, although there is still a high concentra-

tion, the number of beneficiaries has risen substantially in recent years, from 42 in 1974 to 52 in 1975 and 57 in 1976.

Countries on the most seriously affected list receive a considerable proportion of both bilateral and multilateral aid (funds financed exclusively by OPEC members). This amounted to 64% of bilateral aid and 54% of the Arab funds in 1976. And the contributions to the least developed of the developing countries are more than those of DAC members (18.4% and 13.1% in 1976).

Table 3
Financial terms of official aid (commitments)
1973-76

| | Grants as % of total official aid | | | Total grants (%) | | |
|-------------------------|-----------------------------------|------|------|------------------|------|------|
| | 1974 | 1975 | 1976 | 1974 | 1975 | 1976 |
| DAC countries | 64.9 | 69.3 | 69.6 | 86.0 | 88.6 | 88.5 |
| OPEC countries | 64.6 | 48.2 | 62.9 | 79.0 | 72.3 | 79.3 |
| State trading countries | 21.5 | 17.0 | 17.0 | 54.5 | 54.5 | 45.0 |

The terms of aid

Table 3 gives an outline of the conditions of the aid which OPEC members provide as compared to the conditions of aid from DAC members and state trading countries. The terms of OPEC aid emerge as far less favourable than those of DAC aid, but considerably more favourable than those of the socialist countries. However, it is not yet possible to say whether the return to more liberal terms in 1976 as compared to 1975 are indicative of future trends in OPEC aid.

Aid in the vast majority of cases is not tied, which is easily accounted for by the fact that possibilities in this field are limited, particularly as far as the biggest donors are concerned. A certain amount of credit has nevertheless been granted for the purchase of oil by the developing countries.

Table 4
OPEC countries: total net contributions to developing countries, 1973-76

| Donor country | \$ millions | | | | As % of GNP | | | |
|---------------|-------------|---------|---------|---------|-------------|-------|--------|--------|
| | 1973 | 1974 | 1975 | 1976 | 1973 | 1974 | 1975 | 1976 |
| Algeria | 29.7 | 51.4 | 42.2 | (66.6) | 0.36 | 0.43 | 0.31 | (0.43) |
| Iran | 4.9 | 739.4 | 936.1 | 795.4 | 0.02 | 1.59 | 1.74 | 1.20 |
| Iraq | 11.1 | 440.2 | (251.4) | (119.7) | 0.21 | 4.16 | (1.91) | (0.75) |
| Kuweit | 550.0 | 1 250.1 | 1 711.2 | 1 874.8 | 9.17 | 11.46 | 11.44 | 11.50 |
| Libya | 403.7 | 263.2 | 362.8 | 373.2 | 6.25 | 2.21 | 2.96 | 2.43 |
| Nigeria | 5.7 | 134.8 | 347.5 | 176.7 | 0.04 | 0.60 | 1.37 | 0.61 |
| Qatar | 93.7 | 217.9 | 366.7 | 245.4 | 15.62 | 10.90 | 16.90 | 10.37 |
| Saudi Arabia | 334.9 | 1 622.1 | 2 466.7 | 2 826.0 | 4.12 | 7.19 | 7.42 | 7.04 |
| UAE | 288.6 | 749.4 | 1 206.6 | 1 143.8 | 12.03 | 9.78 | 13.59 | 11.45 |
| Venezuela | 17.7 | 483.4 | 472.3 | 333.6 | 0.11 | 1.93 | 1.80 | 1.06 |
| Total | 1 740.0 | 5 951.9 | 8 163.5 | 7 955.2 | 1.88 | 3.47 | 4.01 | 3.28 |

Purpose of aid

Aid intended to provide general support (for the balance of payments) figures largely in the OPEC countries' contributions. But, although this accounted for some 40% of the total in 1976, it was considerably less than the 65% of the previous year. Aid for projects is increasingly important. In view of the OPEC countries' limited technical capacity as far as identifying and assessing projects is concerned, the national organizations and various Arab funds often join forces with other donor countries or with international organizations, particularly the World Bank and regional organizations, for financing projects. The most popular sectors so far are the development of mineral resources and energy, agriculture and infrastructure. For obvious reasons, technical assistance occupies a minor place. □

Table 5
OPEC aid supplied on soft terms, 1973-76

| Donor country | Versements nets | | | | | | | |
|---------------|-----------------|---------|---------|---------|-------------|------|--------|---------|
| | \$ millions | | | | As % of GNP | | | |
| | 1973 | 1974 | 1975 | 1976 | 1973 | 1974 | 1975 | 1976 |
| Algeria | 25.3 | 46.9 | 40.7 | 53.6 | 0.31 | 0.39 | 0.30 | 0.34 |
| Iran | 1.9 | 408.3 | 593.1 | 740.6 | 0.01 | 0.88 | 1.10 | 1.12 |
| Iraq | 11.1 | 422.9 | (215.4) | (96.7) | 0.21 | 3.99 | (1.63) | (0.60) |
| Kuweit | 345.3 | 621.5 | 975.1 | 526.9 | 5.76 | 5.70 | 6.52 | 3.23 |
| Libya | 214.4 | 147.0 | 261.1 | 103.6 | 3.32 | 1.23 | 2.13 | 0.67 |
| Nigeria | 4.7 | 15.3 | 13.9 | 82.8 | 0.04 | 0.07 | 0.05 | 0.28 |
| Qatar | 93.7 | 185.2 | 338.9 | 175.1 | 15.62 | 9.26 | 15.62 | 7.40 |
| Saudi Arabia | 304.9 | 1 029.1 | 1 997.4 | 2 315.8 | 3.75 | 4.56 | 6.01 | 5.77 |
| UAE | 288.6 | 510.6 | 1 046.1 | 1 021.9 | 12.03 | 6.66 | 11.79 | (10.23) |
| Venezuela | 17.7 | 58.8 | 30.0 | 65.0 | 0.11 | 0.23 | 0.11 | 0.21 |
| Total | 1 307.6 | 3 445.6 | 5 511.7 | 5 182.0 | 1.41 | 2.01 | 2.70 | 2.14 |

Positive thinking on transnationals

Direct investment in foreign countries by private companies has nearly doubled in the '70s, to reach a book value approaching \$300 000 m not far off the GNP of France.

The figure represents over 50 000 affiliates of more than 10 000 transnational corporations (TNCs). Yet less than 200 TNCs alone control over half of international direct investment and four countries—the USA, the UK, Japan and the Federal Republic of Germany—account for three-quarters of it.

This is a formidable concentration of economic power. The outflow in private investment from the developed countries comes much nearer 0.7% of GNP than does the outflow in aid, for which that target was set. Yet, besides the fact that, up to now, the multinational corporations scarcely seem to have considered the needs of the developing countries as the principal objective of their investments and have aimed primarily at making profits, it should be stressed that no international body exists to monitor and develop ground rules for these enormous flows, as there does for trade (GATT), monetary questions (the IMF) or development finance (the World Bank). This is described as "a glaring shortcoming" in a comprehensive report on the TNCs recently published by the United Nations Centre on Transnational Corporations, a three-year-old autonomous part of the UN Secretariat.

The executive director of the Centre, former Finnish ambassador Klaus Sahlgren, was in Brussels to attend a seminar and meet EEC officials recently. Giving the *Courier* his personal ideas on multinationals, he pointed out that attempts to achieve a set of rules for direct international investment went back as far as the Havana Charter of 1948. Various conventions and declarations have since dealt generally with foreign investment, but it was the case of the ITT company's activities in Chile in 1972 that focussed world-wide attention on the question and led to the setting up of new machinery in the UN.

Demystifying the TNCs

Since then there has been a flurry of research and accusing fingers have been pointed at the TNCs in general. International bodies, academics and public interest groups in rich and poor countries have been "discovering" the TNCs, whereas before 1970 research was mainly limited to the US. The Centre on Transnational Corporations is centralizing this mass of information, and finding that it boils down considerably when speculative material is sifted out to leave hard facts. At lot remains to be researched.

"The TNCs have sinned in some cases and in many cases they have been useful whipping-boys too. We for our part are trying to demystify their activities and to search for ways and means whereby they could play a more effective role in the new international economic order. I do not think that they are taking over the world", Mr Sahlgren said.

The UN approach has three basic objectives: —to study the impact and activities of TNCs from the legal, economic, social and political viewpoints; to evolve arrangements that will minimize the negative and maximize the positive contribution TNCs can make to world development; and to help the developing countries get a better deal from the TNCs.

The Centre has been active in these three areas, running a wide-ranging research programme, helping to draw up an international code of conduct which is a high priority in the UN approach to transnationals, and expanding advisory services to help Third World governments negotiate.

"The TNCs realize fully which way the wind is blowing and follow developments closely. Since one of their strengths is adaptability, they can be flexible up to a point. They don't want to be instruments of political influence on behalf of their home countries, although they are often felt to be so. What we are really aiming at is to harness the expertise of the TNCs in the service of development", Mr Sahlgren said.

The great expansion of direct foreign investment has really only affected a handful of developing countries—the oil producers, the tax havens and the more advanced ones such as Brazil and Mexico. Nearly three-quarters of the capital investment by TNCs is concentrated in developed countries, and half of it is swapped around in the four or five main investing countries themselves. Attention has shifted away from the management of the companies to their impact on the world economy and their role in development.

"It is not necessarily a dirigistic approach. Of course the TNCs must make a profit, or a reasonable return on their investment, but it can be done to suit better the needs of the developing countries. It is not a zero-sum game where one party's gain is automatically the other's loss—but more like capitalism between consenting adults, if I may joke a little", Mr Sahlgren said.

The socialist, or centrally-planned economy, countries consider their internationally operating firms as alternatives to the transnationals and thereby subject to different rules and procedures.

Demystifying the activities of the TNCs involves unravelling complex legal and economic practices which may be very different in the various countries in which a single corporation operates. The TNCs have an ability to switch production across frontiers and can move swiftly in many ways. The question is what kind of special treatment should such facilities be given, or, to put it differently, to what extent should TNCs be scrutinized more harshly than national companies in comparable situations?

For instance, why should a transnational corporation lose a competitive advantage by being forced to publish information not required from a national company?

"Not all the information can go into the computer. We are not collecting confidential information. There is enough publically available, useful information around to be collected, analysed and disseminated.

As to the important question of national treatment, this is a matter of negotiation between governments in the code context and it would be premature for me to try to predict the outcome at this stage", Mr Sahlgren said.

(1) "Transnational corporations in world development: a re-examination", March 1979.

It is not settled whether the code of conduct now being prepared will be mandatory or recommendatory, whether addressed only to the TNCs or to governments as well. Meanwhile, with 9% of all UN consultants on its books, the Centre is running a wide training programme to help developing countries negotiate with the TNCs, evaluate their investments and integrate them in national development plans. Although it is not involved in investment guarantees, the Centre's long-term aim is also to contribute to a better, mutually useful relationship between developing countries and transnational corporations which, presumably, would lead to more contributions to development, less conflicts and more harmony.

Trust, stability and predictability would probably diminish the need for drastic measures like nationalization—even if governments, of course, must make the policy decisions themselves.

The UN report on transnationals is a "re-examination" not only in that it follows a report in 1977, but in the constructive and imaginative line it takes to the role of the TNCs in world development. It does not dwell mainly on past sins and errors, but looks forwards instead. Developing countries have become better at dealing with TNCs, specifying the terms and conditions of TNC operations and demanding greater participation in decision-making. The transnationals are increasingly working with local enterprise and accepting non-equity arrangements such as licensing and management contracts. Small firms are investing abroad more than before, eroding the bargaining power of the giants. And some of the developed home countries are having second thoughts about the foreign operations of their TNCs, because of the possible loss of jobs and weakening of their international competitive position. Transactions among the TNCs and their subsidiaries represent an enormous turnover—half the US exports in the early '70s were intra-firm dealings.

"The transnational corporations, whether we like them or not, are among the most important actors on the world economic scene; they are deeply involved in finance, production, technology and labour. The new UN approach is to better understand their complexities and to find ways and means whereby they could contribute more to development and to the establishment of a world order which is more just and equitable", Mr Sahlgren concluded. □

B.T.

MADAGASCAR

Results of an EFD investment in the Andapa Basin

The World Bank has made an interesting study of the socio-economic effects of the Andapa-Sambava road, built with funds from the EDF and Madagascar's own resources.

The study was based on an initial investigation carried out in 1964 (also with EDF funds) on the Andapa Basin as it then was.

At that stage, the region was completely isolated and the road was built to open it up. The idea then was the study would be followed by a second study, some time after the road was opened to traffic, so as to determine the effects of a specific road investment. The idea was taken up and the study financed by the IBRD, the ex-post assessment being made in 1975, five years after the road was opened.

As it turns out, the effects are less clear than might have been the case, as EDF-financed hydro-agricultural improvements to the Basin are being made and the effects of this project combine with the effects of the road to alter the situation in the region. But nevertheless, the IBRD survey was able to produce a reasonably precise comparison of the situation before and

after the construction of the road, particularly from the economic point of view.

The rate of return on the whole development, road plus agricultural scheme, was calculated from two angles: the rate from the purely economic point of view of the road users is 6.3%, but if the effect on the farmers is taken into account, this goes up to 11.1%. "The difference in these two figures reflects the considerable increase in surplus agricultural production (subsistence crops), which is an important factor for the economic wellbeing of the populations in a subsistence economy".

Average monetary income in 1975 as compared to 1965 (constant prices for 1975) was 249% for farmers, 148% for craftsmen, 127% for employees and 102% for tradesmen. The difference between the highest and lowest income groups is considerably smaller. In 1965, tradesmen earned 10 times as much as farmers, but, by 1975, only four times as much.

As far as crops are concerned, "mention should be made of extensions to rice growing: 3.5 times more land has

Aerial view of the Andapa-Sambava road



been brought under cultivation and a start has been made on diversification by introducing new cash crops (cloves and ginger)... Coffee-growing has been increased (40% more land) and yields in 1975 were 72% up on those in 1965, which illustrates the success of the OFACA(1) extension campaign. A beneficial diversification of subsistence crops other than rice, maize and various horticultural products would appear to have been introduced.

Increased production

"According to the wholesalers, the volume of products sold outside the region would appear at least to have doubled (perhaps even quadrupled)."

"The advantages linked to production... represent the major part (some 80%) of the advantages of the road project. Of this, 61% goes to local producers and the rest to Madagascar's economy as a whole. Journeys unconnected with production account for a substantial (15%) part of the advantages of the project and the local transporters get the remaining 3 or 4%.

"The increased production due to the project goes hand-in-hand with a reduction in production costs (purchase of input), so the producer's greater surplus implies better returns due to more efficient use of family labour and land. These are spin-off effects. They are not included in the rate of return. Neither is the consumer surplus (general saving on consumer goods previously imported by air). The rate of return quoted is therefore a conservative one.

Farming is being modernized. "More frequent use is made of wooden ploughs and harrows. Whereas one family in 10 owned a plough in 1965, two do now and whereas one family in 10 owned a harrow, three out of 10 do now. A whole range of other equipment was mentioned in 1975 but not in 1965... Transport equipment has also appeared."

Housing and family amenities have also been modernized. The most striking change is in the materials used for roofing. If the number of corrugated iron roofs is the quick indication of development it is said to be, then the situation really has improved astoundingly over the 1965/75 decade.. The proportion of corrugated iron to traditional thatch roofs has been more or less reversed, going from 29% and 71% respectively in 1964 to 74% and



The road cuts through the valley slopes

26% in 1973... There is also... a tendency to build bigger houses. Traditional houses only had one room but most houses in the Andapa Basin now have two... Families own more furniture... There are 10 times as many radio sets... A whole range of items not mentioned in 1964 appear on the list in 1975... Now it is possible to transport wood from the mountain regions either side of the road, furniture is being made locally and sold without any difficulty. There are 13 times more vehicles registered today than there were in 1964."

More services

The road has probably facilitated the extension of services, particularly welfare services, in the Basin. "The number of schools and teachers has more than doubled... iodine deficiency and goitre appear to be on the decline: since the road was opened, there has been a considerable increase in the consumption of fresh fish and other fish products imported from the coast."

Between 1964 and 1975, a banking agency has opened in Andapa and two water supply systems have been laid in the Basin.

People are more mobile. "In 1965/70, 48% of households said they had not

travelled at all and 66% had not received any visitors, but over the 1971/75 period, these figures dropped to 30% and 41% respectively... The road has increased the mobility of all income groups."

Popular support

Statistical data have been completed by an opinion poll. The results are highly satisfactory: the road has clearly been "adopted" by the communities for which it was built. "People in the Andapa region use it a lot and appreciate its positive contribution to the regional economy and to the development of integration with the rest of the province and the country."

This satisfaction does not mean that all the wishes of the people of Andapa have been satisfied. However, "the list of priorities for both individual and collective improvements reflect those of a peasant society already well on the way to becoming a modern community."

In spite of the fact that the non-quantifiable factors (sociological effects, for example) have not been investigated in as much detail as was desirable, the IBRD study makes an interesting contribution to the general problem of assessing the effects of investments. □

(1) The EDF agricultural project.

The African Games must stay

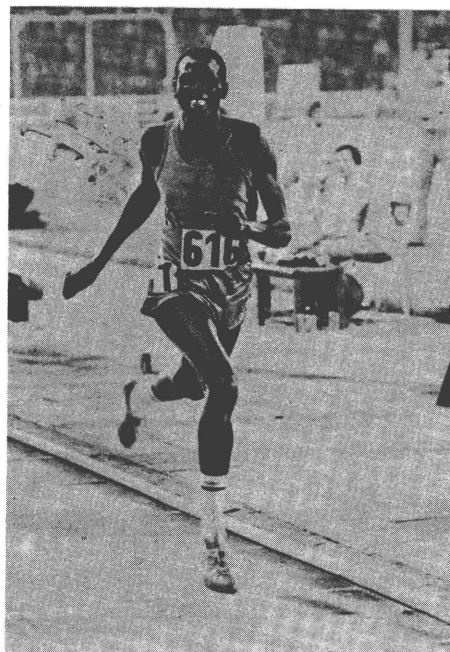
Is this the end of the African Games? Will they be the victim of their own success? What might have seemed a preposterous suggestion a few weeks back before the Algiers meeting and the Algerians impressive organization now haunts the sports organizers of Africa, particularly those on the SCSA, Africans sport's governing board.

The short history of the competition, since the first African Games in Brazzaville in 1965, has, of course, not been without its vicissitudes. They began with Mali backing down as host to the 1968 Games only a few months before they were scheduled to take place and they continued with the Lagos meeting being put off because of the Nigerian civil war. But there has never been any doubt that the four-yearly Games would go on taking place.

But the doubt exists now. In spite of repeated requests by the SCSA, no country is willing to host the Games as Algeria did this year and the Algiers meeting ended without the next venue being fixed. Neither the interest nor the usefulness of the Games is in doubt. Africa's sportsmen must have the chance to meet and compete against each other. But potential organizers are put off by the vast expenditure involved. The sports complex for this year's Games cost Algeria CFAF 50 000 million (about US \$227 m).

A tidy sum. There are several African states whose total annual budget is less than that, so their reluctance, in spite of their interest in sport, to make investments that might compromise their top priority projects is not difficult to understand.

As well as outlay on infrastructure, the host country has to pay all the costs of the meeting, since the countries which take part only make a token payment of \$4 per athlete per day. And they cannot follow in the footsteps of the Olympic organizers and defray their



Mike Boit (Kenya), former 800 m world record holder, came only 5th in Algiers

expenses with gate money, as the African Games usually take place in almost empty stadiums.

And even if there were countries with enough cash to run the financial risk of the Games (Libya, for example, is being ardently courted to host the next meeting), they could well not have the technical staff or the fleet of organizers that are essential for a well-run sports meeting.

So is this the end of the African Games? Probably not. But it is certainly the end of them as organized so far.

Even if Libya says tomorrow that the Games can be held there, it will only provide breathing space, as the problem will remain unchanged. The Games are now so large (almost 5 000 athletes at Algiers) and the countries of Africa in such difficulties, that there is no point in thinking that providence will always produce a country to play host to the continent's sportsmen. So new formulae must be devised. Decentralization, for example.

Africa could be divided into a number of sports zones of six or seven countries each and each zone could take turns at inviting the rest of the continent. Each country in the host zone would be responsible for running one or more events on its territory. And more substantial subscriptions could be introduced for the benefit of the host countries, or each delegation could pay its own expenses throughout the Games.

There are many formulae which should be analyzed, expanded and maybe even combined to save the African Games, the sportsman's OAU. They play a vital part in the fundamental mutual understanding of the countries of Africa.

The regrettable incident at the Libya-Egypt football match, which ended in a fist-fight, should not overshadow the ovation which the Algerian public gave the Moroccan delegation in spite of the strained relations between Algiers and Rabat, or the fact that Ethiopia and Somalia were in friendly competition on the track when they were in armed conflict only a month or two before.

The Algiers Games enabled African athletes to make progress. Several African records were beaten, particularly in swimming and women's athletics. But, perhaps because of the excessive heat, performances tended to be mediocre and this was a big disappointment.

Likewise, many of the athletes who have brought fame to the continent failed to shine this time. It happened to Akii Bua from Uganda, the Munich gold medalist, who was beaten by the Kenyan Kimaiyo in the 400 m hurdles. And it happened to Mike Boit, ex-world 800 m record holder, who only finished fifth in the race in which he forced the pace at the beginning.

Miruts Yifter, the world 5 000 and 10 000 m champion at Dusseldorf last year, was another disappointment. He was reputed to be able to run at any pace and still be able to sprint down the last straight and great things were expected of his meeting with Henry Rono, the Kenyan holder of four world records. But Rono left him standing in the 10 000 m and he dropped out half-way.

One of the real revelations of the games was El Kachi, from Sudan, who won the 200 m and 400 m. This, too, should be food for thought for Africa's sports organizers. Most of their stalwarts have reached retirement age without any successors having clearly emerged.

Can this situation be changed before the Olympic Games in Moscow? □ A.T.

BOOKS

Willi Dolder — **Les Tropiques (The tropics)** — Editions Elsevier — 1978

For most people, "the tropics" brings to mind jungle or virgin forest or sun-drenched palm groves with the nonchalant charm of unspoilt nature blessed by the gods.

But these conventional pictures only illustrate three of the innumerable aspects of tropical vegetation. Temperature, sunshine, wind and rain vary from one region to another and they have created a wide and astonishing range of landscapes from dense forest to desert, from the swamps of Botswana to the arid grassland of the punas, from the llanos of Venezuela to the heather of Mount Kenya, from Florida to Ecuador and from the Zambezi to the Amazon. The tropics are a mosaic of natural scenery. There are places to dream about, to escape to and to holiday in. There are safari parks, hotel rooms and unusual tourist possibilities. Thanks to its eminently knowledgeable authors and remarkably talented photographers, this book provides a scientific and artistic coverage of them all. Every page and every illustration conjure up something different. There are elephants plodding across the Amboseli park swamps, there is a buffalo charging through the dust, an anthill pointing skywards beside a river, a young lion seeking shade in the top-most branches of a fig-tree, a storm gathering over the Everglades and a sunset over the Galapagos.

Willi Dolder and his team bring us a wide variety of information, from the erudite to the unexpected, on the flora and fauna of the tropics. We learn, for example, that the African mamba is the most poisonous snake in the world, that ants shelter under the leaves or orchids, that the one-horned rhinoceros is the third largest mammal on earth and that there are 200 species of aloes in Africa.

This colourful album cannot fail to please the lovers of the exotic. And it will appeal to the increasingly large number of people interested in protecting our natural heritage. For the arrival of man in this privileged environment upset the spontaneous eons-old balance between animal and vegetable kingdoms and caused irreparable damage to primitive sites. The tropics are not only genuinely untamed lands, a last inviolate paradise, but territories where many threatened species will be preserved.

Finally, for animal lovers and seekers

of unusual photographs, there is a special chapter on photographing animals in their natural environment.

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H-J. Hugot — **Le Sahara avant le désert (The Sahara before the desert)** — Editions Hespérides — Place de Milan, A2 Toulouse 31300 — 343 pages

The Sahara has not always been a desert. More than once in its history it has been a welcoming, fertile land. But it was the fertility that proved accidental and the desert has re-asserted its command. At a time of misgivings about the future of our physical environment, this outline of the strange destiny of the Sahara, "the loveliest desert in the world," is of particular interest. The pattern was set before history began. This is the story of a rare and enthralling adventure of civilizations closely bound up with an ecological system which, ultimately, they have been unable to control. But when water and sunshine combined to turn the Sahara into the El Dorado that lives on in the myth of Atlantis, the Saharan populations made surprising cultural progress, as shown by their cave paintings and carvings, an arresting human achievement.

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P. Audibert — **"Les énergies du Soleil" (The energies of the Sun)** — Editions du Seuil, 27 Rue Jacob, Paris 75007 — 316 pp. — 1978

The French publishers Seuil are heavy-weights in the contemporary paperback market and it is instructive to read their offering on solar energy.

The French habit of organizing an argument as if it were written on graph paper clashes spectacularly in this book with an attempt to approach solar technology both as a cult and as a science. Quote: "Against the madmen of dominating technologies, the Sun barges into the world of science, a trouble-maker, winking and fantastical, past caring. He urges the scientists to engage a dialogue with Nature instead of crushing her under their verbiage".

Readers who are neither crushed by such verbiage nor dismayed by the winking and fantastical style will find a comprehensive round-up on solar science, divided into sections on the nature of solar energy, its interest to the Third World, experimental solar

housing, photovoltaic electricity and indirect solar energy from the sea, wind and plant life. This parade of the "energies" of the sun makes it clear that there is no single form of solar power but several, each with its own nascent technology.

Striking out excitedly in all directions, Mr Audibert covers most of what is going on — especially in France — and the mumbo-jumbo will no doubt gain solar energy a hearing among the huge audience of Bermuda triangle buffs. But the main value of the book is that it indirectly conveys a truth about the technological age from which it seeks redemption through a return to nature, viz. that although modern science is still a long way from being a philosopher's stone that can turn anything into anything, scientists are more likely to make a reality of solar energy than antique sages, druids, alchemists, hippies or popular cosmologists.

There is a good reading list of predominantly French work on solar energy.

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Maurice Domergue — **Sources d'information pour le développement (Sources of information about development)** — Société Internationale pour le Développement, Service de Références Développement — 49, rue de la Glacière, 75013 Paris, France — 60 pages — US\$ 3 or FF 15 — 1978

This lists the voluntary correspondents of the SID's reference service at end May 1977. The correspondents cover almost all the facts and activities likely to interest people in development.

They are divided into four groups:

- (1) UN and World Bank organizations.
- (2) Regional and inter-governmental organizations.
- (3) Bodies with national responsibility for relations with SID-SRD (geographical classification by major world region).
- (4) Specialist professional national and international bodies not included in the previous categories (classification by sector).

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Trevor Bottomley — **Business arithmetic for cooperatives and other**

small businesses — £2.93 airmail from I.T. Publications Ltd., 9, King Street, London WC2E 8HN — 1978

This manual (87 pp.) provides a refresher course in arithmetic and an explanation of how to use it in business, with practical exercises. Designed to enable cooperative society staff to train themselves in the calculations necessary for managing a cooperative business, it is very useful for almost any small business, covering costs of production and distribution, trade discounts, cash discounts, gross and net profit, etc. Excellent for polishing up rusty arithmetic and highly practical for the local trader.

The author is secretary for education at the International Cooperative Alliance.

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G. Deon — **Manuel de préservation des bois en climat tropical (Wood preservation in the tropics — A handbook)** — Centre technique forestier tropical, 45 bis avenue de la Belle Gabrielle, 94130, Nogent-sur-Marne, France — 111 pages, a large number of photographs and drawings — FF 60 — 1978

The way wood is used determines its practical qualities and the user therefore needs objective information to help him define and properly solve the problems involved. This is all the more necessary in that the subject of wood preservation and conservation has given and still does give rise to some bewildering suggestions.

No compilation of existing information on wood preservation has yet appeared in French. Nor is there anything specifically on the tropics. And, of course, although a thoroughly comprehensive work might be welcomed by the specialists, it would be of limited interest to the average reader who would soon be put off by the inevitable complexity of such a work. What was needed was a clear, simple explanation of the main problems of preserving wood in the tropics, from the forest to the finished product. This need for simplicity, clarity and relative brevity made the task more difficult for an expert who tended to use specialized vocabulary. But Mr Deon has avoided the pitfalls and one of the main virtues of his book is the constant concern with clarity. Since the original aim was to produce a book suitable for use in the classroom, each chapter ends with

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a brief summary of content and the essential points to remember.

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Buitenlandse handel, hulp, investeringen en regionale integratie in de Derde Wereld (Foreign trade, cooperation, investments and regional integration in the Third World) — Kathleen Steel, Danjël van den Bulcke & Charles van der Vaeren — Cahiers CNUCED 5 — Korte Meer 11 B, 9000 Ghent, Belgium — 364 pages — Bfrs 350 — 1977

This is one of a series of publications on the problems of development and North-South relations which was begun in Belgium in 1973 by the University Association for Development Cooperation and the United Nations Association.

Number 5 covers the influence of association agreements and the Lomé Convention on economic cooperation between the EEC and the Third World and the role of foreign investments in the economic integration of the developing countries. Special emphasis is laid on regional cooperation as a basic element of any development strategy.

The introduction, a previously unpublished statement by President Julius Nyerere on Tanzanian socialism, which is based on self-reliance, sets the tone.

Kathleen Steel submitted her doctoral thesis on regional economic integration as a development strategy in 1977; she analyzes how this field has been influenced by the agreements which the EEC concluded first with the AASM and then the ACP.

Charles van der Vaeren writes on the Lomé Convention, placing the agreement in its international setting in relation to Yaoundé I and II and the new world economic order. He stresses the problems of sovereign states, whose very existence is a serious constraint in the search for a new order in an increasingly internationalized world. He describes the Lomé Convention as, essentially, a practical contribution to altering the nature of relations between developed and developing countries.

In the last section, Danjël van de Bulcke, an expert in transnational companies, discusses the role, significance and advantages and disadvantages of both foreign investment and the presence of transnationals in the developing countries. He proves that the regional economic integration of the developing countries is in the interests of the transnationals and he stresses the importance of not leaving these transnationals to take all the initiative for industrial development, since this would cause inevitable disequilibrium. A study of the regulations for foreign investors produced by the Andean Pact countries, where the tendency is to create local transnationals (i.e. from or controlled by the Andean countries) leaves the author sceptical as to the possibility of establishing greater control in the developing countries in the near future.

No 6 in the series will appear later this year. It will deal with "South-South" strategy/integration and cooperation between the developing countries and will pay particular attention to collective self-reliance.

THE COURIER

EUROPEAN COMMUNITY
AFRICA - CARIBBEAN - PACIFIC

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of the European Communities

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