

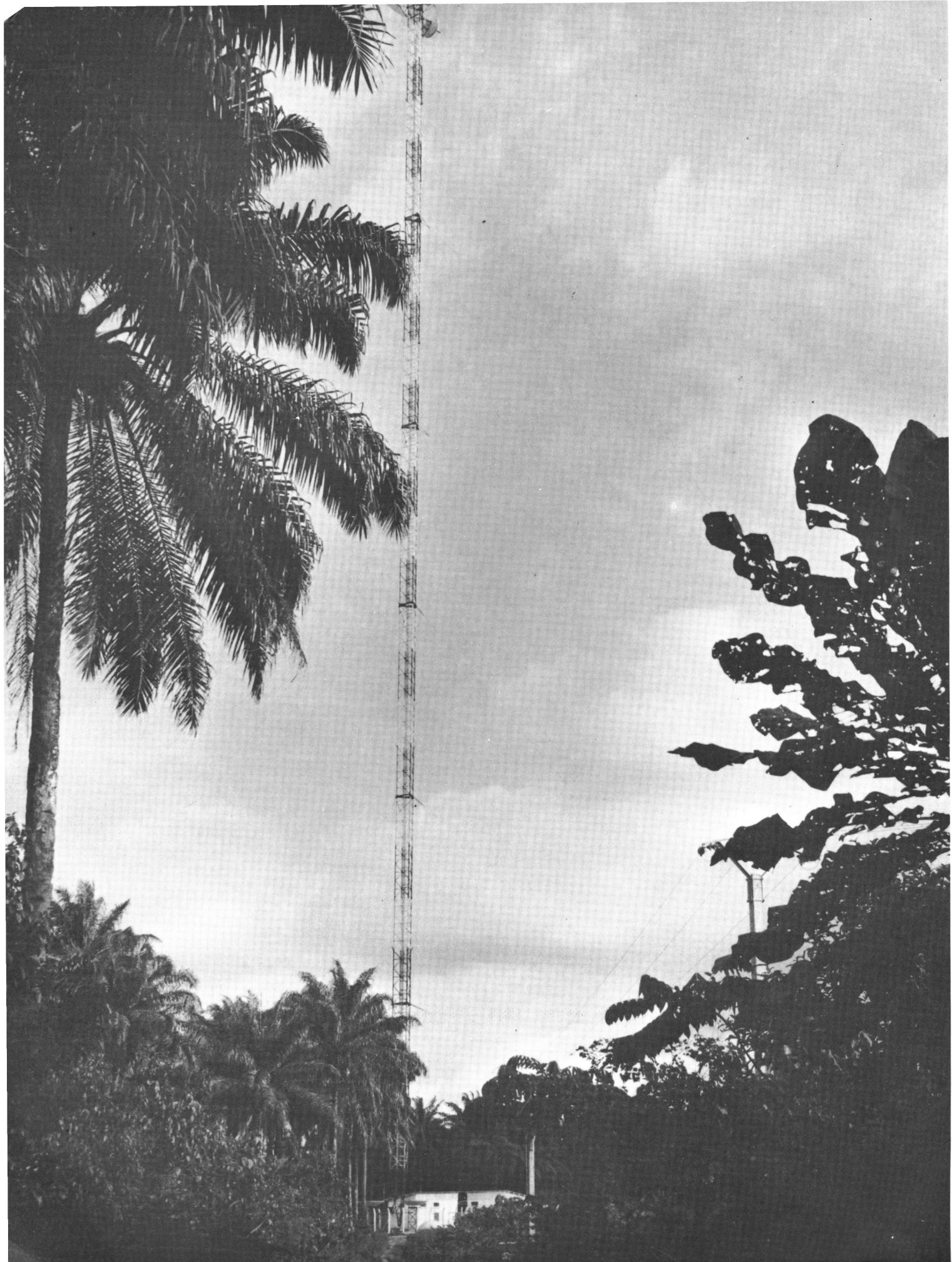
ASSOCIATION

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ASSOCIATION NEWS

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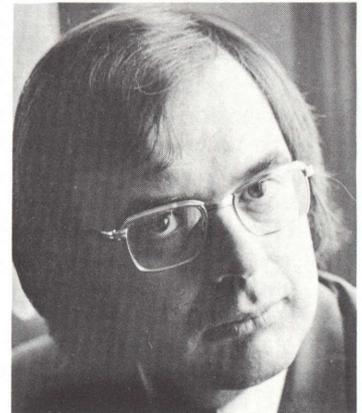
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To our readers

The first concern of editing this magazine is naturally to strengthen constantly the link it has set up between Europe and Africa. Since No. 21, an increasing effort has been made to work out a number of improvements in presentation and to increase the number of interviews with african and european personalities. Some of these deal with the basic problems of development, while others cover topical issues, such as the negotiations for the renewal and enlargement of the Association. This work must continue, and it is encouraged by our own contacts in Africa and in Europe, and by the letters you are kind enough to send. All the same, we should like to know more about what you think and what suggestions you may have to make for this review which, after all, belongs to you. To this end we ask you to complete and return the post card you will have found (in two languages) on the last page of the last issue. This will be a real help to us, especially in choosing subjects for our "Dossier".

In this issue the Dossier is about telecommunications. This is one of the keys to the future and its importance is growing. Originally the links developed were between Africa and Europe, while national networks were neglected, as also were the links across frontiers in Africa itself. This is changing fast. The change is helped by the general background of economic development, by the african countries, wish for closer links and discussion with one another, and also by a number of favourable technical factors. In the early Sixties a major plan for inter-connecting the national networks was drawn up by the International Telecommunications Union (I.T.U.) and a scheme was also prepared for integrating the african network into the world system. Results began to follow, in some cases with help from the European Development Fund; and now Africa is on the threshold of a new era.

This is the era of satellite communications. Fifteen countries are about to follow the example of Morocco and Kenya by setting up ground stations. Through these it will be possible to pass telephone calls,

information of every kind and also television programmes. The Dossier in this issue starts off with an interview with Mr. Mili, Secretary General of the I.T.U., and attempts to sketch out the scale and nature of the prospects coming within range.

In No. 27 we shall be discussing food crops and world food problems. This will appear on September 1, about two months before the United Nations Food Conference. Even now, in 1974, the situation is still dramatic, not only in the Sahel countries but in other parts of the world. There is a danger that this may continue since, for various reasons, the period of surpluses seems to have ended. According to the estimates of the experts, the stocks of cereals in exporting countries in 1961 would have sufficed to feed the whole world for 95 days; but in 1974 they covered no more than 29 days consumption. The causes are many, and of some complexity. They include drought, the higher prices for fertilizers, population growth, world inflation, wastefulness in the richer countries and a number of other factors. By way of a prologue, the present issue contains an interview with Mr. René Dumont, agronomist and ecologist, which gives us food for thought about a collection of problems already foreshadowed by "Association News" in the issue dealing with drought and water supplies in the Sahel.

Other subjects will be tackled later. Transport will be one of them. And when the time comes, this review will of course give an account of the new Association agreements, both with the "A.C.P." (the new nickname for the countries of Africa, the Caribbean and the Pacific) and with the countries of the mediterranean basin. The Dossier is the heart and substance of the review and it needs suggestions from you. It was indeed a letter from one of you which set us to work on the recent issue about african businesses. So please fill in the card we mentioned at the beginning of this editorial, and send it to us, because it is your interests that really matter to us. ■

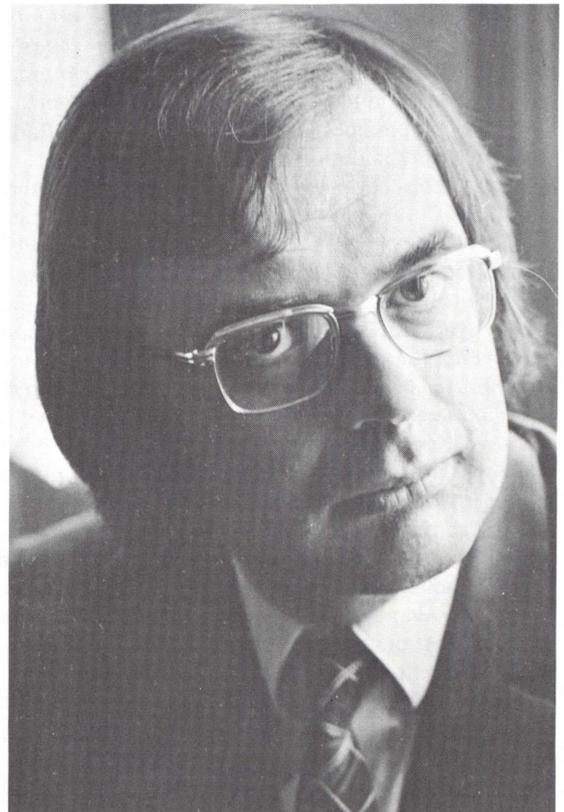
The editor

Jan PRONK
**Netherlands development
cooperation minister**

**"Development aid must strike at
the roots of inequality"**

The Hague. — Jan Pronk, 34, is the youngest member of the Socialist Progressive-Denominational cabinet which came to power in the Netherlands in May 1973 after seven years in Opposition. He is considered the furthest Left of the Dutch ministers, and from this standpoint he has been instrumental in forming the uncompromisingly Socialist policy of his ministry. His most striking success has probably been to persuade the Netherlands government to restructure industry so as to make room in Dutch markets for Third World products. Mr Pronk believes a fairer distribution of wealth should be carried out at home as much as abroad, a theme which underlies his campaign to interest Dutch public opinion in development problems, and he is determined that aid to the Third World should primarily be granted to countries whose governments believe equally in the principle of a fairer distribution of wealth. He is a "globalist", calling for an E.E.C. development policy on the world scale, and he has been active in supporting independence movements in developing countries.

Mr. Pronk studied economies at Rotterdam and specialised in development problems before becoming a member of the Netherlands Development Aid Evaluation Committee from 1966-68. He taught at the UN Asian Institute for Economic Planning at Bangkok, and was an advisory member of the Netherlands delegation to the third U.N.C.T.A.D.



▶ *Mr. Pronk, the Netherlands has been quick to realise the importance to developing countries of a stable longer-term aid programme. Could you outline the 1972-75 second development co-operation plan and the Netherlands cooperation policy in general?*

Yes, the second development co-operation plan 1972-75 was a plan for four years. A new government came

into office last year and we will stick to the plan for this year, but we are going to change it in such a way that from now on we will have rolling plans. We think it is very important for developing countries to know exactly how much foreign currency they will get, not only for the next year but for a longer period, because they want to use the foreign exchange for planning

purposes and you can't plan just for one year. The second development cooperation plan was based upon the aim of reaching the 0.7% aid target; as a matter of fact we were at that time the only country in Western Europe, with France which was able to set the target, which is a target of the second development decade.

As regards development policy in

general at the moment we say development aid as such is not the most important thing. A very important part of the current thinking of the Netherlands government is that **you should only increase your aid to developing countries if at the same time you are able to carry out policies with regard to the roots of inequality.** This means trade policies, investment policies, restructuring policies for your own production structure, policies with regard to immigration of foreign labour and also a foreign policy which really is a contribution to decolonisation. If you don't carry out such policies—which is very difficult for a small country like the Netherlands, which has given away a lot of its decision making power to international bodies, like, for instance, the E.E.C.—if you are not willing to carry out such policies you should not stress development aid too much, because in such a situation development aid is only a correction of the result of an economic international process which itself is not changing. That's a very general statement but it is for me very important in our policy. **We aim at an integrated policy.** We have a minister of development cooperation who is attached to a ministry of foreign affairs. His main task is not spending a development aid budget but coordinating a total development policy which is much more than development aid. That means that he has some coordinating powers with regard to the U.N.C.T.A.D. policy, the G.A.T.T. policy, etc.

We also want to empower aid policy to help not only developing countries to increase their growth rate, which is an aim of development, but **we especially want to contribute to development aims which are important for the lower income groups.** Which means that in our decisions to give aid we give special importance to income distribution, income redistribution, employment, small-scale agriculture, etc.

We think we can only carry out a fundamental ambitious development policy when we at the same time carry out a fundamental equality policy within our own country. An ambitious development policy costs money, costs some production possibilities, costs also some employment possibilities. Such a policy, such an ambitious policy cannot be carried out just by the elite of rich

countries, it should be supported by society as a whole. Society as a whole will never support an ambitious policy in favour of inhabitants of other countries when the prospects for society as a whole are not bright themselves. That means that **an income equality policy in the Netherlands is a condition for an ambitious development policy.** Those are just four elements of our policy.

The main beneficiaries of Netherlands aid are distributed fairly equally between Latin America, Asia and Africa. Could you sketch the Netherlands' relations with these three continents, and clarify why a considerable part of Dutch aid goes to the relatively richer countries in Africa? What is the Netherlands' policy towards the parts of its kingdom overseas (Surinam, Netherlands Antilles)?

Part of our policy always has been that we gave rather high priority to multilateral aid and that within our bilateral aid, which at the moment is about 70% of our total development aid budget, about 50% of the real flow of resources to developing countries should be concentrated on a specific group of countries. That might be a policy for a big donor country, but we are not, even if we increase our aid to **1½% in 1976.** The consideration of aid was based upon the idea that we should concentrate especially on those countries for which international consortia or international consultative groups had been established, for instance under the leadership of the World Bank. Even if we concentrate our aid to specific countries, that flow of aid from the Netherlands to developing countries is only part of a total flow of international resources to that country, and we should coordinate it with all the other donor countries. That was the main criteria and it led to decisions to give aid to India, Pakistan, Indonesia, Kenya, Columbia, Peru, all countries where there are international consultative groups. Moreover, the government at that time wanted to spread that group of recipient countries, about 10 to 13, equally among the continents. My criticism of that policy was that the institutional criterion as such is not bad but you should really have development criteria. Concentration as such I think is a very good idea, and in future we will

concentrate our aid to countries which we choose on the basis of **three criteria.** **Poverty:** we will give more aid to the really poor countries. Until now only one of the well-known group of least developed countries was included, Tanzania. Secondly, **aid countries who really need development aid,** not widening of their trade prospects or foreign private capital investment. Thirdly, aid countries with economic, social and political structures which enable governments to carry out a **development policy which benefits society as a whole,** not only the elite class from which the government itself has been chosen. Those are the criteria for the new choice of concentration countries. Of course the three criteria will be complemented by the idea that there should be a certain disparity amongst continents and that we cannot just from one day to the other say to a certain country which does not fit in these countries that it does not get aid any more.

You asked also about the specific position of Surinam and Netherlands Antilles. Surinam and Netherlands Antilles were colonies of the Netherlands and are still not completely independent. At the end of the '60s we found ourselves in a rather peculiar situation—these governments themselves for one or another reason did not want to become completely independent. A lot of economic assistance was given to Surinam and Netherlands Antilles in the past. The new government of Surinam last year declared that it will be independent before the end of 1975, and the Netherlands government, which also is a progressive Left government, welcomes that. With regard to Netherlands Antilles it isn't yet that far. Surinam and Netherlands Antilles are very small but we think we have a responsibility for them in the future because we made them what they are now. And that means they will remain important countries on our list of recipients.

** The Netherlands plays a conspicuous part in international organisations dealing with development cooperation. How does this fit in with your bilateral policy?*

I favour multilateralisation of aid because I think the problem of development is a world-wide problem which cannot be solved by means of intensifying bilateral relationships; bilateral relation-

ships are very important but the multi-lateral approach is the only possibility of solving world-wide problems. That means that we go very strongly, for the strengthening of the United Nations Organisation, for instance, because it is the only system in which nearly all countries in the world are represented on an equal footing—not completely but on fairly equal footing. Within the aid organisations of the United Nations the donor countries do not take the decisions alone; decisions about the distribution of aid are made by donors and developing countries together. So you have a kind of a melting pot of theories and opinions out of which a kind of aid can take place. The problem is that multilateral aid is still only a fraction of the total international flow of resources. If we are in favour of the UN organisation with regard to aid, we are less in favour of regional organisations. We give a lot to the European Development Fund because we are obliged to. It is a decision based on the Treaty of Rome, but we consider the European Development Fund far worse compared with real international multilateral aid funds, for two reasons. Firstly it is a regional fund; it gives too much priority to a specific group of countries. It will be better in the future, because then within the new association we shall not only have the former groups of African states. Secondly, we are rather critical of the aid philosophy of the European Development Fund, which is much more, you may say, capitalistic, than, for instance, the aid philosophy of the United Nations programmes. There is also the World Bank as another international organisation. In the past we were critical with regard to the World Bank especially because it was an organisation carrying out aid within a capitalist framework. Since MacNamara took over it is much better. It gives much more weight to income distribution criteria, employment criteria; it gives much more weight to the possibility of reaching the people at the grass roots than in the past. Any time a new political issue comes to the forefront, we hope it will be possible to solve it within an international organisation. May I give one example: **we decided as a new government to give aid to a liberation movement**, it never had been the case, anyway not with regard to giving aid to those people

living in the so-called liberated areas within the colonies of Portugal. We want to do that bilaterally because the liberation movements want bilateral aid, but we also want to do it multilaterally, for instance, by a United Nations development programme, and we are making intense efforts to do so, although many other countries don't want it. **We think it necessary that many countries, not only one country such as the Netherlands, give aid to liberation movements.** It should be a political decision made by many countries.

Part of our philosophy is also that an important part of our aid can be channelled via private organisations—I don't mean commercial private organisations but non-profit organisations such as Labour unions. That is based on the idea that those organisations are very important in reaching the grass roots.

* *You consider public opinion very important. Would you care to comment on that?*

Public opinion is especially important as soon as you want to carry out an ambitious policy, but information to public opinion never can do the task—you should carry out good welfare and equality policies within your own country. If you have that, and we try to with the present government, of course awareness and information policies are extremely important for the people to know about development policies and also for the government to know the attitude of the people. We cannot, for instance, just take upside-down decisions with regard to the restructuring of our production structure if the labourers within such marginal industry are not, for instance via the labour unions, involved in such decision making. So awareness policies are important in a two way channel. For that reason we spend more than a million dollars on awareness and information policies.

► *To consider the character of Dutch aid as opposed to other European forms of aid, what sort of technical assistance is the Netherlands particularly well placed to provide, and where does it provide it? For instance, is it considered important to have Third World students in the Netherlands?*

The main idea behind our technical assistance policy is that it should be very temporary. **Education especially should take place within developing**

countries. As long as it is not adequate within developing countries we can have students within our own country, but only on a small scale. On a large scale we would build organisations which might hamper the widening education policy within developing countries. With regard to technical assistance projects, we have some comparative advantage in agricultural projects and in water resources projects, due to the peculiar situation of the Netherlands itself.

► *One of the most disheartening aspects of education programmes in the Third World has been that students once educated can find no employment, and some Netherlands projects have been aimed mainly to create employment. Has this been successful?*

In the past employment projects did not have an important place within our aid policy. It is my intention to give more weight to employment projects but it is extremely difficult to carry that out. One reason is that in the government policies of many developing countries, employment creation as such until now did not have high priority. If you want to carry out employment projects you should in my view especially concentrate on small scale agricultural projects, and in that field we are taking some steps. Such projects should be completely integrated in regional development programmes, including social amenities, etc. Donor organisations as a whole still do not know exactly which concrete projects really are the most important for an increase in employment. Another element of our employment policy with regard to developing countries is that, in our trade policy, we are willing to take decisions which lead to better international division of labour. Much unemployment in developing countries is due to the fact that the employment possibilities are within the rich countries, given the spread of productive activities over the world.

► *So you would be in favour of transferring European industry to the Third World?*

Transferring complete industries is not a very wise proposal. I would say it is very important to curb the growth of specific industries to allow their growth in another region of the world, by means of levelling international trade in specific sectors and transferring

certain sub-sectors of specific industries. We come to the conclusion that it would not be a wise policy to transfer, for instance, total ship-building or total textile industries from Western Europe to developing countries. But there are important sub-sectors of the ship-building industry, sub-sectors of the textile industry, which are really labour intensive, which should be fostered in developing countries, and we would be very much in favour of such a policy. We think we can only carry it out within the E.E.C. as a whole and not within the Netherlands, because the problem is that if such a policy was carried out only in the Netherlands, the same sectors within the other European countries would benefit instead of those sectors within the developing countries; and secondly, we can only carry out such a policy if at the same time we create alternative employment for the people involved in those sectors within Europe. That means you should be willing to have a much more intensive government policy, much more decision-making powers also with regard to investment policies and investment decisions on the level of the government.

► *Would you be prepared to reserve some of the funds originally destined to the Third World for paying for this restructuring of European markets?*

Yes, we announced that we are willing to do so ourselves with the Netherlands and in the next budget a first amount of money will be put forward. Everybody talks about the necessity to do more in the field of trade, more in the field of a change of the production structure. Nobody is doing so because it costs money. I think it is worthwhile to finance those adjustment policies, anticipatory adjustment policies, out of development funds, if such an amount of money does not result in a decrease in the official flow to developing countries. We will finance it out of the surplus of the developing budget on top of the .7% growth target. You may say that if such a policy was accepted also by the other European governments it might be possible to have such a fund for such purposes, for instance, complementary to the social and regional fund on the level of the E.E.C. A sectoral fund.

► *How much progress has been made recently in untying Netherlands aid and helping developing countries to*

participate in international tenders? Until recently most Netherlands aid has been rather tied, although this is not your policy.

Yes, you may say completely tied. The Netherlands was always very much in favour of untying aid if all other countries were in favour of doing so, and I may say that one of my predecessors really spent a lot of energy in pushing other countries to untie aid. But it is a bit of a vicious circle. If nobody does so then you also don't do so. Our policy is that during this governmental period of four years we will again push other countries, but if we do not succeed we will take unilateral steps. I think there will be a breakthrough now. Together with Germany we took an initiative in September within the development assistance committee of the O.E.C.D., which had as its aim that countries together would decide that for untying it would no longer be necessary for all donor countries to untie their aid. What would be necessary is that there should be a specific group on a certain scale, 6 to 7 important donor countries, not all 18 big donor countries. That was accepted but the energy crisis made it very difficult, because it resulted in a worsening of the balance of payments of most of those countries for which it was acceptable. But I have good hopes that in June this year decisions will be made within the O.E.C.D. that many countries, perhaps 13 to 14, will untie their aid in such a way that a developing country can buy commodities out of aid funds not only in the donor country from which the aid comes but also from all the other developing countries, including itself.

► *Finally, Mr Pronk, how do you think Netherlands aid will develop?*

In our view **we can only go on using the E.E.C. as a channel for our aid decisions and some other decisions with regards to development cooperation when the E.E.C. really turns into a forum within which it will be possible to carry out equality policies with regard to the Third World.** Equality not only in terms of income between countries and within countries but also equality in terms of decision-making power. I think the E.E.C. until now was just an inward-looking group of countries really aiming only at an increase of the welfare

of the countries of the E.E.C. itself—sometimes taking care of an interest of a country outside the E.E.C., but only if it did not conflict with the E.E.C. interest. This should be changed into an outward-looking policy, which means that firstly, the welfare interests of the Third World should be a factor in what I would like to call our own welfare utilisation, and secondly the E.E.C. should be open to international organisations, it should not be a group of rich countries aiming at an increase in the power of those countries, thereby hampering the possibilities of international organisations within which all other countries also take part. An open policy of the E.E.C. with regard to the Third World and an open policy of the E.E.C. with regard to the United Nations is a precondition for us to go on with an intensification and harmonisation of our relationships with other E.E.C. countries on the field of development cooperation. I am not very optimistic about the possibilities of opening the E.E.C. towards the UN and towards the Third World.

Things have changed a bit. The Germans also want a world-wide E.E.C. policy. Since the British entered the E.E.C., things have changed if you compare the present ideas within the E.E.C. with the ideas from 1957 until 1970 about. I might also add the Danish; very often in decision-making there is a common understanding between those four countries. Maybe the new French government is more world orientated than the French governments were until now. So there are possibilities. Anyway, we think that the content of the policy is more important than the organisation of the policy. That means that within the present important discussion on harmonising the development policies of the E.E.C. governments, in our view we should first try to have one view with regard to policies before taking decisions about integration and harmonisation. And as far as I am concerned I am not willing to harmonise the Netherlands development policy with the development policies of the other developed countries within the E.E.C. if we do not have a common view with regard to the most fundamental points. That includes decolonisation and equality as the main aim of development policies. ■

Interview by B. TRENCH

World hunger

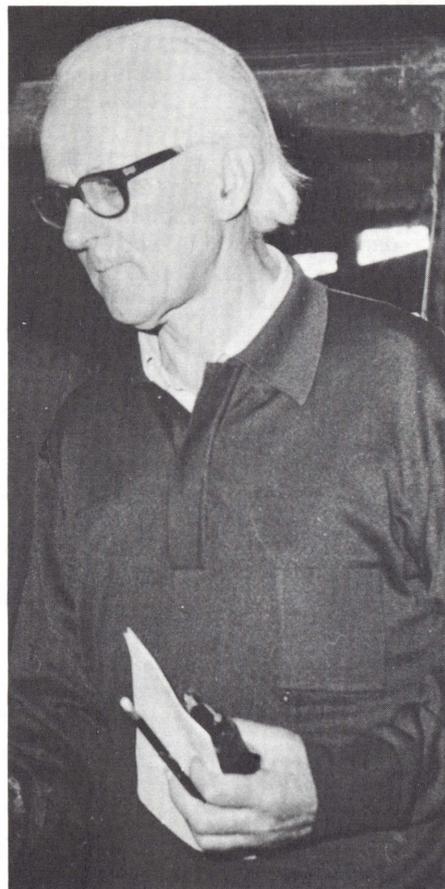
René Dumont, author of "L'utopie ou la mort" (Utopia or death) foresees a "terrifying famine" threatening humanity, unless the wealth of the world is distributed differently.

The Sahel drama has made public opinion aware of famine, an old scourge which the Europe of today is barely conscious of. It is now tending to become worldwide; and "Association News" proposes to devote its Dossier in the next issue to food problems in Africa and in the world as a whole. By way of introduction to this issue, Alain Lacroix called on Professor René Dumont to ask his views about the short-term world prospects in this respect.

René Dumont is an agronomist and an ecologist, professor at the Institut d'Etudes Agronomiques in Paris. He is one of those who for many years have been writing books and articles and giving lectures about the famine peril. His agronomic experience has accumulated not only in study and laboratory but also in the field, through the many missions he has undertaken throughout the world. René Dumont is the author of more than 20 books. English versions of the titles include: "We are headed for famine", "Black Africa is on the wrong foot", "Peasantry at bay", "Utopia or death".

The ideas of René Dumont are always a challenge, and he is vigorous in his defence of them. His attacks on the wastefulness in our society, on the excessive growth in population and on the bad utilisation of the world's natural resources, came before the report of the M.I.T. (Massachusetts Institute of Technology) and the Club of Rome. "Drought and famine in the Sahel are a tragic example", he explains. "There has been an exaggerated expansion in groundnut cultivation; and cattle herds have increased and multiplied in the attempt to ape the agriculture of Europe. In this there has been destruction of the humus and a trend towards over-pasturing. The climate has done the rest. It is the whole of our growth policy which has to be revised".

There is passionate earnestness and often real conviction in this man who, in mind and spirit, is "70 years young" and so deeply convinced of the truth of what he says. Recently, it should be added, René Dumont was one of the candidates for the presidency of the French Republic.



► It was in 1966 that you wrote "We are headed for famine", calling attention to figures suggesting that famine was on the way. Since 1958, you said, food production in developing countries had been growing less rapidly than the population, and you foreshadowed a world disaster in or about 1980. Things now seem to be growing worse earlier than you then thought. Why is this?

It was of course an accident of climate which brought the Sahel famine earlier than expected. But this accident of climate was something more. It was an accident of ecology and an ecological disaster. Cattle, sheep and goats were vaccinated, and this brought a population explosion among the herds without a parallel increase in forage. The grazing was damaged by over-pasturing. Wells

were dug, but all around them the over-large herds destroyed the pasture. The first disaster was thus in the cattle-raising. The second was in the reduction of the fallow land, because there were no more hands to till it and no more export crops. Reduction of the fallow cut down the supply of humus to the soil, and for lack of it, the soil lost its cohesion. The dry harmattan wind of February

carried off the fine sand, the lime, the organic elements; and all that is left is a skeleton of coarse sand, which cannot hold the water, so that the irregular rainfall cannot water a normal crop.

At present the famine is made worse by two things. In 1966 the wealthier countries were able to come to the help of India, because they had reserve stocks, but such stocks no longer exist. At the last wheat harvest there was three weeks consumption of wheat in stock; and the 26 m. hectares of reserved land in the United States and Canada, which the soil bank had been paying to keep out of cultivation, were brought back into cultivation three years ago. There are thus two potential reserves we no longer have. To this must be added the over-consumption of meat, the demand for which is consistently growing in Europe and the United States, which means that we are eating in the form of meat the food which is lacking in developing countries.

► *You suggested eight years ago that research for dealing with foreseeable difficulties should be channelled into two objectives—trebling food production between now and the end of the century, and getting control of the population expansion. In regard to the former objective, many people had hoped much from what is perhaps wrongly called the "green revolution", and the new varieties of wheat, rice and maize which were to enable tropical countries to secure yields per hectare as high as in the temperate zone and to grow two crops a year. Could you tell us why the results did not quite come up to expectation?*

The most important country affected by the "green revolution" is India. I must, to begin with, draw a distinction between what happened with wheat and what happened with rice. For wheat, production has been raised during the last seven years to 2½ times the former volume, from 12 to 30 m. tons. This came partly from increases in the planted area, but still more from an increase in yields per hectare. North-western India is a country of dynamic farmers. Most of the land is irrigated and new irrigation was

laid down so that it became possible to secure very considerable results. The situation for rice is quite different. Most of the rice fields are not watered by an irrigation system, but simply by the notoriously irregular monsoon rains. In many cases the farmers do not have access to official credit at normal interest rates, and they cannot resort to the usurers for their purchases of fertilizers. The green revolution was accordingly, a failure, or at most a success for only a few of the wealthier farmers, so that all it did was make the rich richer and the poor poorer.

► *The food problem raises not only the question of quantity, but also those of quality and diversity. Do you not think that the most serious shortcoming is the protein deficiency for young children, and its irreversible impact on physical and mental development?*

Yes, this is an obvious fact which I have tried on many occasions to drive home. More recently, however, it has been pointed out to me that, in the areas most affected by the famine, there has been a simultaneous shortage both of proteins and of calories. When these occur together the position is of course the more dramatic, as I was able to see for myself in India in the Bihar. This shortage of proteins is not the result of a lack of proteins on the earth's surface. There are enough proteins to provide ample supplies for all the world's children, but an inordinate amount of these proteins are fed to our animals and we eat too much meat. Examples are the powdered milk and fish flour, and the cattle cake made from soya and groundnuts. Every time we eat a groundnut, we are eating at the same time the oil and the cattle cake, and the content of the groundnut is fully comestible. As regards soya, it is a known fact that in China, where milk has not entered into the diet for thousands of years, soya is one of the explanations for a reasonably normal health level, despite the very considerable shortage of animal proteins. Soya thus ranks as a very valuable dietary item. Taking the consumption of cereals as including the indirect consumption in the form of animal products, there are

people who eat as much as a ton of them a year, while there are others who eat only 125 kg, such as the populations of southern Algeria and India.

► *The position seems to have grown specially difficult on account of the rise in prices of raw materials, which many of the developing countries have to import. In food products and fertilizers alone, it is estimated that developing countries will have to spend altogether an extra \$5000 m. in 1974. The poorer countries will not be able to foot this extra bill. Is it your view that insufficient supplies of fertilizers may have dramatic consequences in some countries?*

Yes, there is an insufficiency of fertilizers, and there are also insufficient supplies of oil and its products. In countries such as Bangladesh and India, which have not enough foreign currency to buy the oil products they need, it has been necessary to stop the irrigation of the rice fields. I think the over-pricing of oil is even more important than the over-pricing of cereals and fertilizers. Moreover, the higher prices for various raw materials work to the advantage of some countries, because they are among the sellers; but there are discrepancies and distortions in the price behaviour of different raw materials. Some of them have risen very sharply, such as cocoa, sugar and of course oil, and phosphates are another instance. Others, such as jute and sisal, have risen to a much smaller extent. As Claude Cheysson showed us not long ago, it is certain that there will be six countries in disastrous circumstances. Serious situations already arise if urgent measures are not taken on a much bigger scale than those to which Brussels and Paris have hitherto been accustomed.

► *You spoke just now of the position in the Sahel and the underlying causes. How do you think the food situation is likely to develop in Africa?*

The present position in Africa is as follows. Since 1959 the population growth-rate has been running ahead of the food production growth-rate. For

the Third World as a whole, the situation is somewhat different. Food production per head remained around the same level between 1959 and 1969, but it has fallen back in the last five years, between 1969 and 1974. The situation is growing worse everywhere. Two years of extreme drought, coming on top of a period of ecological maltreatment is something it will be difficult to get back. For my part, I believe we must think in terms of a forage revolution on the same lines as Europe made for itself in the 18th century. At the time in question, however, Europe had plenty of draft animals, whereas Africa has none. It is a very difficult undertaking to ask people to run their farms primarily for their own subsistence then to grow a few groundnuts as a cash crop and then forage for the beasts which bring them so small a yield.

► *Are there encouraging prospects for research into the production of new foodstuffs, such as yeasts, or into resources not yet adequately used, such as the food potential of the ocean?*

Petroleum yeasts may play quite an important part, but they have not yet been used for human food, only for cattle. The ocean, Cousteau believed ten years ago, was going to yield something very substantial; but the total catch of deep sea fish, which had risen sharply up to 1970, has been decreasing over the past three years. Moreover, the coastal waters of the continental shelves, which account for only 20% of the area of the ocean bed, contain 80% of the biological wealth of the sea. Increasingly these coastal and estuarial zones are being shockingly polluted. Commander Cousteau, who is the leading specialist, told us recently that we must not expect any material increase in production from the sea. So far as fish breeding is concerned, steps are now being taken which will spoil all the possibilities.

In 1967 the Paddock brothers published a book which raised much discussion. Its conclusions are open to discussion, but there is one title which comes into prominence today. This is "Famine in 1975", and this is on our immediate threshold. It seems to be necessary to mobilise all resources on the world scale.

On a proposal by Mr. Cheysson, whom you mentioned just now, the E.E.C. Commission lately agreed to put to the Council a plan of action by the Community. Under this the E.E.C. should launch the idea of setting up a world fund to provide emergency aid to the poorer countries, and those most affected by the rise in the prices of raw materials, oil and primary foodstuffs. This fund, if it is really to meet the requirements, should make available at least \$3 000 m., and the Community could undertake to contribute \$500 m. Among the countries most affected, and therefore eligible for aid from the fund, are the countries of the Indian sub-continent. What do you think of a proposal on these lines?

I think it is an excellent idea, but my personal opinion is that \$3 000 m. is altogether insufficient. I have recently come back from Bangladesh; and for this country alone \$1 000 m. will be necessary if it is to have any certainty of escaping famine conditions. I would therefore accept a proposal on these lines if the provision for it as a world operation were between \$5 000 m.—which I regard as the absolute minimum—and \$10 000 m. The figure you mention is absolutely inadequate for the scale and extreme gravity of the requirements.

► *Another aspect of the problem arises in the world population explosion. At present the world population is around 3 500 m. and by the year 2 000—less than 30 years ahead—we shall not be far short of 7 000 m. The explosion seems difficult to control, especially in developing countries. In your view what*

are the causes of this and what is the outlook?

The world was much too slow in taking account of these demographic problems. As long ago as 1930, when I was a young agronomist in Indochina, I emphasised the very serious threat of a population explosion. At that time the world had a population of 2 000 m., and nobody had concerned himself with the threat ahead.

In 1950, the Ceylon government had asked the United Nations for aid in birth control publicity; but for 16 years the United Nations—communists and Catholics alike—stood out against the granting of any aid for contraception and family planning. The matter was not taken seriously until 1966, by which time it was much too late.

When I gave my first warning in 1930, there were 2 000 m. people on the surface of the globe. We have now got to 3 750 m., and there are strong hopes in the United Nations that by the end of the century the figure will not exceed 6 500 m. The demographers assure us that there is a demographic inertia it is difficult to overcome. As an agronomist, I would reply that there is an agricultural inertia, that is to say, that it is extremely difficult for agricultural production to be increased in a hurry. Under the combined moment of these two inertiae, which imply difficulty in either a quick reduction of population or a quick increase in agricultural production, the only possibility ahead seems to be a terrifying famine—unless indeed the wealth of the world is differently distributed, and unless Europe and America reduce their meat consumption by half. In the latter case, we should have immediately available the whole tonnage of cereals and proteins we need to feed the population of the world. Unfortunately this presupposes a social order different from that which now exists on an international footing. ■

Gratien-Lazare POGNON, Ambassador of Dahomey:

“Europe can do more for the A.C.P. countries”

Seven months from now, on January 31, 1975, the new and enlarged Convention between the European Communities and the countries of Africa, the Caribbean and the Pacific (A.C.P.) is due to come into force. Association News asked the ambassadors of Dahomey and Malawi (page 15) to give us their views on the current state of the negotiations, and what the A.C.P. expect from Europe-Africa-Pacific cooperation.

► *Dahomey has a high population density compared with other french-speaking African countries, and its proportion of intellectuals is specially large. These facts have led to the country being called the “quartier latin” of Africa. They seem to be the main features of your country, Mr. Pognon. What effect does such a situation have on the economic life of the country?*

I should like to begin by saying that it is only because the question is raised exclusively in the african context that a density of 23 inhabitants to the sq. km can be considered high. Moreover, we also have to stay in the african context to argue that the proportion of “intellectuals” such as it exists in Dahomey, is more than normally large. Facts are facts, however; and by comparison with our neighbours and other african countries, the population density and the higher education framework are indeed high. The problems this raises are obvious. In the first instance, in so far as the population growth-rate is equal to or greater than the economic growth-rate, it is a negative factor in our development plans. In any case our economic growth calls for bigger efforts than in other countries where the demographic situation is more favourable.

On the question of the “intellectuals”, there was undoubtedly a period when the number of Dahomey citizens who had had schooling at the higher level was unduly great by comparison with the number of jobs at the same level available in the country. Unfortunately independence could not bring a radical change. In the colonial period there was an outlet which was very valuable for Dahomey recruits. This was the Federation of French West Africa, which was a market for staff workers on a large scale compared with the comparatively small numbers coming from Dahomey. Today we have a nationalistic spirit in all the independent states. It is even micro-nationalistic, and it has understandably led to accelerated training of national workers at staff level, especially for replacing foreigners in the staff jobs. We thus have to face an increasingly serious problem in striking a balance between the number of jobs in public and private employment and the number of staff workers already available or coming forward through the education system.

As everybody can see, this largely accounts for what may be regarded as political instability in the country. The striking fact about recent developments in Dahomey, in comparison with other

former french colonies is that on the eve of independence the colonial power, in putting forward a single leader for the country, was unable to choose between the three or four principal figures on the political scene. Our difficulties in securing political, and therefore economic, stability, stem partly from this. Even today it has repercussions on all levels, including the army, which is one in which the proportion of university men is much greater than elsewhere.

► *Fundamentally we could almost apply the dictum of General de Gaulle, by saying, that the problem in Dahomey is not the vacuum but the overflow.*

It is indeed the overflow. It is also the level of this overflow. And in order to dispose of this question, I would add that, if our university training had been channelled into the development sectors, if we had enough engineers and agronomists, perhaps we should have found it easier to deal with our development problems. The actual fact was a heritage from the colonial period, which had diverted the intellectuals of Dahomey rather into the tertiary sector. They went mainly into the administration, or into the realm of intellectual speculation, for we have had many hellenists, philosophers and lawyers. Since independence, the big change we are attempting to bring into our education system is not aimed to stem the production of staff level workers, but to divert them into the sectors dealing with economic and social development. We are also trying to induce those who have already absorbed some degree of culture to take an interest in the problems of production,

to get back to the earth, or into the firm or into industry. The example has now been set and we hope that the main part of the country will understand that there is nothing lowering about the land and the working of it; and thus we hope we shall be able to settle the problem of securing an agricultural renaissance.

► *What you say is extremely interesting in view of our recent interview with Mr. M'Bow, Deputy Director General for education in UNESCO. Speaking of West Africa as a whole, he made the same remark as you have just made about Dahomey, that 10 or 50 years ago, and before independence, the education system was not directed nearly enough towards the productive sectors. As you said, however, it seems that even though Dahomey may have more staff workers than it needs, it may be able to achieve some degree of reconversion of some of them. Most of them have an adequate intellectual basis to acquire specialised qualifications in line with the country's economic and social needs. Looking at it from this point of view, and with a special eye to the future, it does not seem that Dahomey is badly placed.*

In any case this is the basic concern of the government in its education policy. I should add that our efforts in this direction will only be successful if we continue to put some of our staff level workers at the disposal of other african countries, as part of a policy of inter-african cooperation. This problem of surplus staff workers will still be with us in Dahomey for some time to come.

► *Another Dahomey characteristic is its geographical position and the considerable difference between the northern and southern parts of the country. This is both a difficulty because of the long communication routes and an advantage because it makes Dahomey one of the means of access to the sea for countries in the interior. As a transit country between north and south, therefore, the railway, road and port equipment of Dahomey must meet the requirements both of the country itself and of other countries. In the coastal area, too, Dahomey is also a country of transit*

between Ghana, Togo and Nigeria. What do you think of this special situation and the part played in your country by the transport systems?

Your question is partly a reply to the problems you raise. With a distance of some 750 or 800 km between the extreme north and the extreme south of the country, we have very serious problems in keeping communications open for the northern regions. Both railways and roads are matters of great concern to our government. I should say that in this field, to which I shall revert presently, it is Community aid which has enabled us to improve our road equipment very considerably, by comparison with our heritage from the colonial period.

I should now like to say that this geographical situation is not exclusively an inconvenience. It contains undoubted advantages which have not been adequately brought out, and I should like to do so now. On the east we have a frontier of about 750 km with Nigeria, and on the west nearly 620 km with Togo; and in the north with Niger we cover about 188 km of frontier and with Upper Volta over 270 km. Our position is thus excellent for regional cooperation. As I see it, this should be based primarily on geographical proximity rather than on similarities inherited from the colonial days. The geographical position of Dahomey is one of those of which the greatest possible advantage should be taken.

Foreign investors interested in Dahomey should not be unduly impressed by the smallness of the national market, but should appreciate that, because of these conditions, the market can easily be extended into the neighbouring countries. A significant example is that of cement. We have considerable material resources which would cover the construction of a top-ranking cement works, but the internal consumption is less than 100 000 tons annually; and we cannot find international finance, since the profitability threshold seems to be nearer to 200 000 tons. The problem takes on another aspect when it is appreciated that the chalk seams are in the eastern part of the country, near the nigerian frontier, so that we could have at our



Gratien L. Pognon

"The gap between the rich countries and the poor is still wider than before"

disposal the immense market of Nigeria. The maximum output proposed for this cement plant is 600 000 tons a year. Besides covering our own requirements, this would supply scarcely a quarter of the tonnage currently imported into Nigeria. The same applies to a number of industries which, because of our geographical position, could be planned and set up not for the small market of 112 000 sq. km and 3 million inhabitants, but for the much bigger market of more than 60 or 70 million people in Nigeria.

I shall be told, of course, that this depends on the relations we maintain with our neighbours, for everybody knows that in these young african republics politics are the determining factor. In practice the successive governments we have had since independence, and more especially the present revolutionary military government, have been wise enough to maintain excellent relations with all our immediate neighbours. These of course foreshadow regional cooperation, provided the investors coming to Dahomey appreciate the advantages of this policy and of our geographical position.

► *What is the importance to the Dahomey economy of the aid from the European Development Fund?*

What I have just said about foreign investors indicates that Dahomey is

having much difficulty in attracting external aid, though this is highly desirable for a country which cannot, for the time being, finance its development from its own resources. I said "for the time being", which leads me on to acknowledge that the E.D.F. accounts for a very considerable part of the resources made available for financing development. In the absence of a national investment budget I would refer to the functional budget, which amounts on the average to 12 000 m. CFA francs, and note that the E.D.F. investments in Dahomey amount to an average of 1 200 m. CFA francs per annum, or a tenth of the total functional budget. Moreover, the E.D.F. accounts for nearly 30% of the external resources available for investment in the development sector in the interior of Dahomey. The percentage is higher than for the other A.A.S.M., for the 19 countries of which the average is around 12%. The E.D.F. intervention has been applied with much purpose and foresight. The renewal of palm groves, the cashew plan and the road building owe a great deal to the E.D.F. aid. Work is now being put in hand to improve a road which means much to us—the section between Bohicon and Mallenville, which is specially important because it improves our communications with Niger.

I would also mention the water supplies to the town of Cotonou, which has become one of the capital cities in which the population is rising at an alarming rate. This raises serious water supply problems and also, because of the nature of the soil, problems of drainage. Thanks to the E.D.F., all these problems are about to be solved, and we regard the E.D.F. support for Dahomey as an extremely positive factor.

► *In the current negotiations between the A.C.P. countries (Africa, Caribbean and Pacific) and the European Community, the fundamental and the specific problems have now been put on the table. What do you regard as the main difficulty, and what is your government's greatest concern in regard to these negotiations?*

The negotiation problems between the A.C.P. and the E.E.C. have indeed been

put forward abundantly and with a clarity which it is only fair to emphasise. But is it not also true to say, that this abundance and this clarity are mainly concerned with difficulties arising on the E.E.C. side, leaving the impression that among the A.C.P. everything is for the best? In any case, I should prefer to answer your question by putting the emphasis on the internal difficulties in the A.C.P. group, rather than on those which come from our European partners. The many reports on the negotiations have put a new accent upon the obstacles Europe puts in the way of the requests of the A.C.P. for better terms in the future agreement, its reluctance to consider novelties, its resistance to far-reaching amendments, its refusal to make the sacrifices required to give the cooperation a more definite content. All this has been reported again and again, and it would be a matter for despair if public opinion and the governments of Europe should have failed to appreciate the real concern of the A.C.P. about this.

It is just because this has been said so much, that it seems only fair to give

some account of the internal difficulties in the A.C.P. group itself. I know I am taking risks in doing this, but it is worthwhile if it gives a salutary prod to the consolidation of the group. It is in itself a miracle, and a very encouraging one, that 43 governments coming from such different backgrounds, with preoccupations and interests so different, divergent and even opposed to one another, should have come together in a joint group to negotiate with Europe. But must it be our sole objective to secure the survival of this group as such? Should we not admit once for all that the group has become a fact, that we must begin to use it for the far-reaching discussions, and even for those which have brought us to the threshold of rupture? I am one of those who believe the group is now firmly enough established to avoid the renewal of such upheavals.

I can illustrate this from a few examples. The first of these is regional cooperation. From the outset of the negotiation of the E.E.C., we have emphasised to the Europeans the importance we attribute to promoting and strengthening cooperation between our countries. We have

E.D.F. programme to level and drain more than 870 ha in Cotonou. The work included building rain storage tanks.



Afrique Photo

told the E.E.C. that it was for us a fundamental requirement that no item or clause in the future agreement should hinder the harmonisation of our development policies for the purpose of genuine economic integration. Not only did the Community regard this as a well-founded objective, but it put forward specific proposals, among which the most orthodox is that a specific proportion of E.D.F. financing should be reserved for multinational projects. Unfortunately it has turned out that the doubts about these proposals come from us of the A.C.P. ourselves. It is as though the 15 or 20% of the E.D.F., kept back for multinational projects, were being abstracted from the contents of each of the national pay packets. We have here come up against the fundamental difficulty of ourselves accepting those concessions and mutual sacrifices required of us, so that the development of each should be completed by the growth of all.

The most disturbing aspect is the way we react to difficulties of this type. Instead of making a frontal attack and trying to overcome our national egoisms, we tend to dodge the discussion and put it aside till later, in fact, leaving it to others to make our decisions.

I should also like to mention the special measures to be taken for the less advanced countries. In this field, too, we were the first to tell Europe how important it was for us that an extra effort should be made for those among us in which the development level is lowest. It was when we came to discuss the criteria for defining the "less advanced" countries, and the nature of the measures themselves, that all the conflicts of national egoisms began to complicate matters. According to some accounts, they are not far from adopting criteria which will make practically all the A.C.P. eligible for a place on the list of the less advanced. Everybody knows that the longer the list the smaller will be the advantages, and still less will be the effect on the development level in countries where it is lowest. Here, too, a full-scale considered discussion still has to be avoided, so that the group can be kept together.

These are two among a number of examples which illustrate a serious

difficulty, additional to the divergences of background which naturally exist among the A.C.P. It is more disquieting than the other difficulties, because it raises the fundamental problem of the sacrifices and concessions the countries which are better off should be willing to make to those less favoured, if they wish to make a reality of the much heralded concept of solidarity. A hesitation about pooling part—and by no means all—of the resources offered for our development by the industrial countries of the Common Market, suggests even greater difficulties when it comes to a pooling of our own resources produced from our own soil, our sub-soil and by our labour. Such a refusal to design and execute projects of value to the development of several countries is an unhappy sign for people like myself, who are convinced that for most of the A.C.P. countries, the prospects of getting off the ground economically, or even of survival, depend on genuine economic integration. Such hesitations and refusals, coming to the surface inside the A.C.P. group, are scarcely likely to strengthen our hands in negotiation with the industrial countries. Still less can they lead towards that movement—so momentous but so indispensable—to pool our natural and human resources, harmonising our development plans and integrating them together, and abolishing the customs barriers between our countries.

The main concerns of my government emerge naturally from what I have just said. Dahomey, like all other A.C.P. countries, is seeking to ensure that the future agreement with the E.E.C. will guarantee it advantages at least equivalent to those of which it has had the benefit under the Yaoundé II Convention. I say "at least equivalent" because if we were to obtain from Europe nothing more than what is contained in Yaoundé II, our progress would have gone into reverse. It is a matter of concern for Dahomey that, for example, the scale of aid and its total volume should be substantially raised.

On questions of trade, we should wish the accent to be put on the need for increasing and improving production in our own country. By this I mean that,

quite apart from the normal rules by which trade is governed, it must be recognised that for countries such as mine, the problem is not so much one of access to markets as of producing more and producing better.

So far as the future agreement is concerned, these are Dahomey's most immediate preoccupations. Above and beyond this, I should like to insist upon the very great importance Dahomey sees in the convention being an additional force in african cooperation. In my view the inter-regional cooperation, required for the maintenance and strengthening of the A.C.P. group, cannot be the concern only of a single country, especially a small country such as Dahomey. Inter-african cooperation, based as I have said on geographical proximity rather than on community of culture—I almost said "community of colonisation"—must be safeguarded, maintained and strengthened through the agreement. In any event, we think that these should be the preoccupations of every country when we come to discuss the problems, so often of a prickly character, in this negotiation.

The E.E.C. Commission, in its memorandum on development and cooperation policy, proposed a system for stabilising the export receipts for the principal african products. What do you feel about this important proposal?

We could talk round the clock about whether the proposal in the Deniau memorandum was a new departure, but at any rate it is progressive. It is to be regretted that the Council, and therefore the E.E.C. member countries, has not yet taken up a definite attitude about this. The A.C.P. are concerned to get the best terms they can from their cooperation with the E.E.C., especially in their internal development programmes. For them it is self-evident that the stabilisation of the receipts they obtain from the export of their produce to the E.E.C. is a matter of capital importance.

In fact the problems seem so important to us that we are now unanimous in saying the machinery proposed in the

Deniau memorandum is insufficient. In the first instance, this is because "stabilisation" means fixing, and would apply for a specified time to quantities and minimum prices for the produce we export. It makes no due allowance for the necessity, which certainly applies in our case, of guaranteeing rather an increase in the resources we obtain from our exports. For this reason, the attitude of the A.C.P. is that what should really be stabilised is not a specific volume of financial resources, but its purchasing power. This is what we want, for we are not out to secure money for hoarding, but resources to be invested in our development. In our relationship with the E.E.C. countries, we want to use the product of our exports for importing capital goods, manufactured goods, services and technology which, for many of us are conditioning factors for setting our economies in motion.

Obviously if you stabilise the funds at our disposal for buying these goods and

services in the European market, but fail to find any way of stabilising the cost of these goods and services, the result is inevitably a reduction in what our resources will buy. For this reason we think the problem has got to be thought out afresh. It is a question of securing a substantial reduction in the deterioration in the terms of trade between our countries and Europe. I think it is from this standpoint that the new machinery should take into account this preoccupation on the African side.

► *In conclusion, Mr. Pognon, are you optimistic about future eur-african relations?*

Optimistic?—that would be saying a lot. In some ways, however, I am not pessimistic. This is because I believe Europe and Africa, by the sheer force both of history and of geography, are "condemned to cooperate". The problem

is to decide what is the best form of cooperation, and how it shall work. As regards the conditions in which the present negotiation is proceeding, it is to be feared that Europe, in the economic crisis through which it is now passing, may tend to withdraw into itself. This is a policy which must not be underestimated. More specifically the fear is that the E.E.C. may think of its opening upon the outside world only in terms of its own problems. This means that Europe may be attaching less importance to cooperation with Africa—of which Dahomey is a part, economically as well as geographically—than with other countries which may hold the key to various difficulties with which Europe is now confronted. One of my reasons for not being an optimist is that Europe may not favour cooperation in the immediate future, and may not be willing to make the effort to improve the terms of cooperation, except with those countries

(read on page 17).

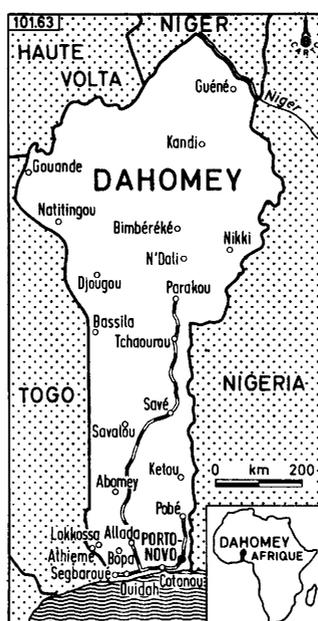
DAHOMEY An outline

Dahomey is a 112 600 sq. km strip on Nigeria's western border, with a population of 2 700 000, its access to the sea commanded by the capital, Porto-Novo, where more than a third of the population live.

Dahomey was a French colony until 1960. Since independence the country has been conspicuously politically unstable even by African standards, with ten presidents and five different constitutions—hence its description as the "Latin Quarter" of West Africa. A national union government based on a presidential triumvirate was interrupted by the army on manoeuvres in autumn, 1972, and the present President, Lt. Col. Matthieu Kerekou, took power with a "revolutionary military government". President Kerekou's 13-point internal plan of November 1972 notable included taking over the economy and launching a major education programme.

Dahomey has since revised its

relations with France under a foreign policy of "non-alignment". In November 1973 the country took part in



the francophone Africa meeting at Paris to reconsider the French franc area, forming the West African Economic Union with the Ivory Coast, Senegal, Upper Volta, Niger and Togo.

Dahomey is a member of the Organisation of African Unity, but has hesitated to join the West African Economic Community as long as its main trading partners, Nigeria, Togo and Ghana, are not members. Further afield, Dahomey notably enjoys Chinese favour and aid, and has relations with East Germany and North Korea. A member of the A.A.S.M., the country has received more than 20 million u.a. under each of the E.D.F. programmes.

Dahomey's G.N.P. is about 250 million u.a., with a trade deficit of around 50 million u.a. a year. Exports (some 50 million u.a.) only cover 55% of imports. The main products are manioc, yams and sorghum, with palm oil, groundnuts and karite, cotton, coffee and cocoa.

Timon S. MANGWAZU, ambassador of Malawi, hopes the A.C.P. countries negotiating with the E.E.C. will

“Accelerate economic development and reduce dependence on the outside”

► *Mr. Mangwazu, your country has been taking part in the negotiations on the new Convention between the European Communities and the A.C.P. (African, Caribbean and Pacific countries) since summer 1973. Which of the four main aspects of the negotiations (industrial, technical, financial and commercial) seems to you the best suited to your development needs and why?*

Yes. It is true that Malawi has actively participated in the negotiations right from the beginning. It is difficult to say precisely and immediately which of the aspects that have been the subject of negotiations we are most interested in. However, I would want to say that industrial, technical, financial and commercial matters are all inter-related and eventually very important to a developing country like Malawi. Malawi is heavily dependent upon agriculture; therefore the logical theme in this respect is to see that our agricultural exports are increased both in their value and quantity. Consequently, commerce is of paramount importance at this stage of Malawi's development. We therefore aspire to achieve one of the main principles, one of the eight principles, which were listed by the Heads of State in Addis last year, that is free and unlimited access of our products to the Community market, and this we would like to achieve with the help of all our colleagues within the A.C.P. group of Ambassadors.

► *The negotiations are still going on, but making relatively slow progress; they are unlikely to finish as early as envisaged at the start. What are the particular points of difficulty in the talks?*

It is acknowledged that the negotiations are proceeding very slowly and that their conclusion will go beyond the envisaged time. However, a word of caution ought to be mentioned here—it is not the speed that is important in these or any other negotiations but rather the quality of the outcome. There is a saying in English which says 'more haste, less speed'. In this respect it would be unwise to rush the negotiations only to end worse off. What we want are the best possible terms of the new Convention which would accelerate our economic development and reduce our dependence upon external aid. The other part of your question I would answer as follows: it is indeed right in that the A.C.P. position vis-à-vis trade, financial and technical cooperation as clearly and as strongly as possible has been put on the side of the E.E.C. But the responses from the E.E.C. are still expected on a number of points we raised. The difficulty is probably on the side of the E.E.C. rather than on ours, in that due to certain political developments within the E.E.C. States it has not been possible for them to come to an agreement on what sort of responses they should offer to our demands in the two fields, namely trade

and financial and technical cooperation. We shall wait for these until they come.

► *Are there any differences of opinion among the A.C.P.? If so, what do you think they are?*

An important thing to note here before attempting to answer a question like this is that there are 42 or more states within the A.C.P. group. Now, naturally, in the beginning there were prophets of doom who prophesied that this won't do, that the group of A.C.P. would disintegrate and that they would all be in disarray. The contrary is true now in that we are agreed on all that we want to achieve in all the fields that are before us in negotiation. There might be minor differences in emphasis on various topics and various demands but the truth of the matter is that we are very united, in fact more than united, and this perhaps to the disappointment of those who wanted to see us disintegrate.

► *What should be the E.D.F.'s role in the next agreement, and how much of a say do you think the A.C.P. should have in running it?*

When you say E.D.F. and E.D.F.'s role I assume that you are implying the E.D.F. Committee. If it is the E.D.F. Committee you are talking about, I would like to say

this, that my understanding of E.D.F. is that it is *not* an Association institution, it is an institution which has its legal status derived from the E.E.C.'s internal agreements concerned in the document 70/544/E.E.C. Art. 14-16. If we then understand that this E.D.F. Committee is not an Association institution we shall then be in a better position to decide as to what participation we want in this E.D.F. Committee. In the view of my country, we see the E.D.F. Committee as a very useful instrument in taking certain decisions; although we are aware that the Commission takes all the decisions, we would like to see Malawi's projects being defended by Malawi's financial experts, development experts within the Commission as well as within the E.D.F. Committee. This is how we see the role of the E.D.F. Committee. The role should be that of providing the necessary funds for development but also that it should accommodate our representation especially at a time when our country presents its projects. This is our statement.

► *One of the most serious handicaps in trade between Europe and the A.C.P. is the deterioration in terms of trade between the Third World and the industrial countries. What should be the scope of measures, such as those suggested by the E.E.C. Commission aimed at establishing stabilised export receipts for some A.C.P. countries, for the A.C.P. in general and Malawi in particular? And what would be the main disadvantages of such an export resources guarantee system covering only 7 or 8 products?*

You are quite right in saying that terms of trade between industrialised countries and the Third World states are declining. Now naturally one could say this, that whereas the values of



Timon Mangwazu

industrial products, industrial goods, are appreciating year by year, those products which are declining for the developing countries, the A.C.P. countries included, are the primary products. Prices for raw materials are declining year by year, except of course for the current development in the prices of oil and a few other primary products. Generally speaking, therefore, the terms of trade for our goods have not been favourable. If you ask whether the E.E.C.'s scheme of stabilisation of export earnings is going to solve this problem then I would say that partially it will and partially you need, I think, an international commodity agreement under the auspices of U.N.C.T.A.D. perhaps, or G.A.T.T. You need an international commodity agreement to solve effectively the differences, the deteriorating terms of trade, but

otherwise we would say and Malawi says that the E.E.C. scheme is welcome, and we should want to see how best we can improve it so that it can mitigate the adverse effects arising from the deteriorating of terms of trade; and we also agree with you, or as implied in your question, that the commodity coverage of the scheme proposed by the E.E.C. is rather limited. We would like to see it include, for example, tobacco and tea. If these are included then perhaps the scheme will be of greater use to the majority of the A.C.P. states.

► *The main lines of the content and form of the new Convention will probably be hammered out in June or July, when the A.C.P. ministers and Heads of State meet respectively in Dakar and Mogadishu. What sort of Convention would you like to see come into force on February 1, 1975, supposing the negotiations progress as planned?*

This is a question which at the present moment is very difficult for a number of A.C.P. states to answer. We look at the negotiations now in a different light from how we looked at them before we were actively involved in the negotiations. We are discussing not so much a Convention like the Yaoundé, we are discussing not so much a Convention like the Arusha, but we are discussing in order to achieve for our individual states the sort of a Convention which will suit us best in the new circumstances. Malawi sees of course its role as that of trying to bring about a Convention which will embrace the two main principles of the previous Convention, the trade aspect or the development of trade, and financial and technical cooperation. If the new agreement embraces these principles Malawi will be very happy, especially if the terms of the agreement are right. ■

Interview by L. PAGNI

MALAWI

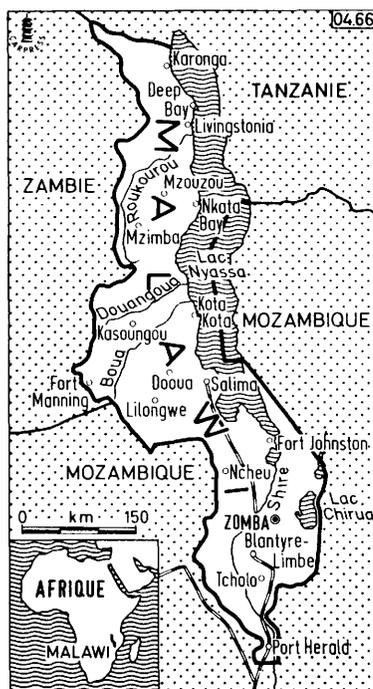
An outline

Malawi is bounded on the north by Tanzania and on the west by Zambia, and is wedged into Mozambique on which it depends for its outlets to the Indian Ocean. It covers an area of 120 000 sq. km, of which about a fifth consists of lakes. There is a population of over 4½ million, a large proportion of whom are in the agricultural regions in the south, where the population density is in some cases as much as 150 people per sq. km.

The Malawi capital is Zomba (pop. 20 000), but this is to change, and the future capital of the country will be Blantyre (pop. 110 000).

The official language is English, but the local Nyanja language is spoken by most of the Malawi people.

Politically Malawi is a member of UNO and of the Organisation for African Unity (O.A.U.). The external policy of Dr. Kamuzu Banda, the President of the Republic, is based on "selective non-alignment". Thus, though Malawi seeks balanced and friendly relationships between the different European and black communities in this part of Africa, it



maintains its official links with Rhodesia and South Africa.

Economically the per capita G.N.P. in Malawi increased at an average rate of 7.5% p.a. in 1964-68, but it is one of the lowest in Africa, amounting

in 1968 to only \$69. The transport infrastructure is in general very poor and operates as an obstacle to agricultural development and to the country's tourist trade. For some years, however, transport policy has been a priority matter in the government's various development programmes.

Agriculture, fishing and forestry are the main pillars of the Malawi economy. The chief crops are tea, tobacco, tung oil, cotton and groundnuts.

The stock of money is rapidly increasing, showing a growth of 18.8% in 1971 compared with 14.8% in 1970. At the end of 1971 it amounted to 38.8 m. Kwacha (the Kwacha, which is divided into 100 tambala, is equivalent to 50 p. sterling).

Malawi is one of the English-speaking countries receiving very considerable aid from Great Britain. In regard to the E.E.C.-A.C.P. negotiation, the Zomba government stated, in January 1973, its preference for the first formula offered (a convention of the Yaoundé type) in Protocol 22 of the British Act of Adhesion.

Gratien-Lazare Pognon

(from p. 14)

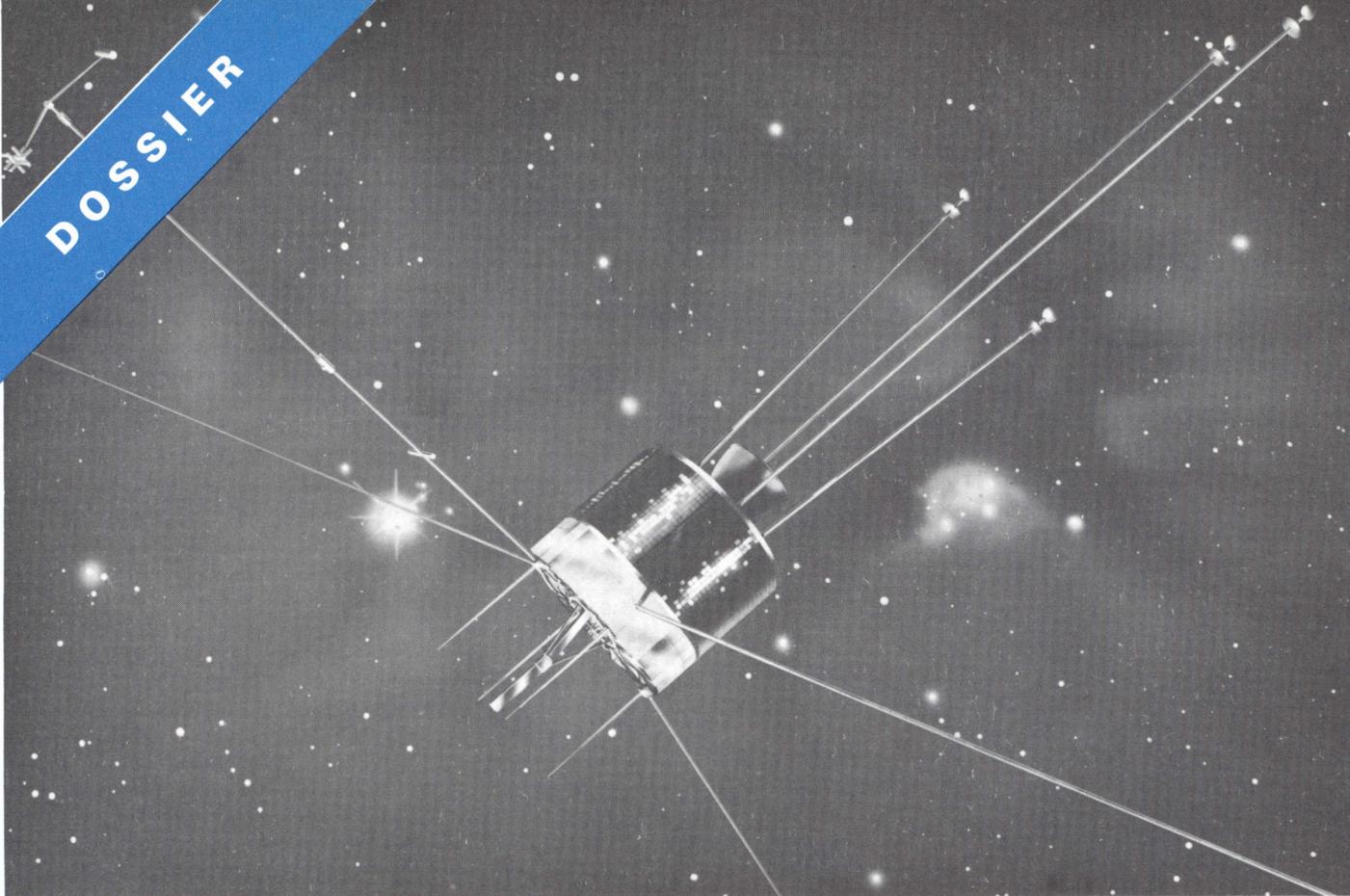
which have the capacity to unsettle its economic system. I am thinking mainly of the oil-producing countries and those which supply various raw materials which have become strategic, or are indispensable for European development. On the other hand, I am not pessimistic, because I think that, since we are condemned to cooperate, the counsels of wisdom will prevail and will in the end make Europe realise that its difficulties

are only relative in a world in which the poorer countries are clearly suffering more from the energy crisis than are the Nine nations of the European Community.

Because of the oil crisis, the gap between the poor countries and the rich has grown wider than it was before. If Europe appreciates the reality of this, she must necessarily agree that, despite the crisis or even because of it, a bigger effort is called for to help the A.C.P. Extremes of poverty and destitution in Africa cannot be a factor in favour of the

prosperity of Europe, and even before the Sahel drought Europe had recognised this. The tremendous outburst of solidarity called up in Europe by the Sahel drought, and Europe's big effort in aiding the Sahel populations, are grounds for hoping that our fears may be vain and that the future cooperation agreement will successfully cope with the growing economic difficulties of the A.C.P. With this hope in mind, there are, for the present, grounds enough for not being pessimistic. ■

Interview by A. LACROIX



The satellite: most suitable form of telecommunication for Africa?

Telecommunications

Telecommunications are one of the top priorities for rapid economic development. It is a field in which Africa is some way behind the rest of the world. For every 1 000 inhabitants, the african countries have only nine telephones, where Asia has 14 and Latin America 27. The installation growth-rate for telecommunications in Africa is 5% annually against 12% in Asia.

There are many causes of this arrear, and they date back a long way. Until just before independence neither the economic status nor the political and social organisation of Africa were considered in terms which would enable it to take a place in international systems, and still less in relationships with the outside world. Thus, an enquiry covering 42 countries in 1968 showed that, out of 832 telephone channels between african countries, 380 of them still passed through Europe: and this was true even when the countries were next door to one another. One can hardly forget the shockingly bad connections, largely due to a system of high frequency waves dating back to the second world war.

During the last 15 years Africa has emerged into the international scene. Its requirements for national, regional and international telecommunications have

been found to be of major importance. Still more important is the increasingly close interdependence of the african nations, and we are now coming more than ever into the age of audio-vision. The african countries are well aware of this, and are increasingly, especially with I.T.U. (1) help, working under bilateral cooperation arrangements with E.E.C. countries and the E.D.F. to make good the arrear in their telecommunications. This relates not only to the quantity but also to the quality: and they are using the most advanced techniques, such as communications satellites the feature of which is their potential for "multiple access". This is a facility which is particularly attractive to Africa, because of the low population density, since it avoids the need for constructing very long and unprofitable surface channels for the small internal traffic.

I.T.U. is playing a large part in this campaign for modernising african telecommunications. We accordingly asked the Secretary General to give us some details of what the Union is doing, especially with regard to the pan-african telecommunications system.

(1) International Telecommunications Union.

“The pan-african telecommunications system is an essential factor in the cooperation between our countries”

**says Mohamed MILI
Secretary General of I.T.U.***

► *Though most african countries are members of I.T.U., the organisation is not very well known to the public. Could you tell us what it is, and what are its basic objectives?*

Not so long ago I.T.U. was very little known among the general public, despite the importance of telecommunications in modern life, and despite the fact that the Union dates back to May 17, 1865 and is the oldest of the inter-government organisations. With a view to making the Union and its activities better known, we now hold a World Telecommunications Day every year. This is celebrated with some pomp and circumstance in most of the member countries.

For 109 years I.T.U. has been working in a spirit of full international cooperation and has thus facilitated continuous programmes in telecommunications, both nationally and internationally. This relates to telephone and telegraph systems and telex, and also to radio and television. Quite recently the spectacular development of telecommunication by satellite was only made possible by the coordinated I.T.U. action on the technical side, and in regard to international regulations.

Fortunately we are sure that in all countries, and more particularly the countries of Africa, the people in key positions, who determine the economic development of the countries concerned, are increasingly aware of the fundamental part I.T.U. is playing. The best way of defining its objectives is to recall the wording of the International Telecommunications Convention, which is the governing document and amounts to an international Treaty between the member governments of I.T.U.

The object of the Union is:

- a) maintenance and extension of international cooperation for the improvement and rational utilisation of telecommunications of every kind;
- b) promoting the development of technical methods and their most effective operation with a view to increasing the output of telecommunication services, increasing their utilisation and, so far as possible, generalising recourse to them by members of the public;
- c) harmonisation of national efforts towards common objectives.

I might put it more precisely by describing I.T.U. as a non-profit association between independent countries, in which specialists keep in very close touch with technical progress and lay down the standards for the different kinds of telecommunications equipment, and in which government representatives meet in periodic conferences to work out by

general agreement the rules of operation and the international regulations governing telecommunication services. The Union can thus be regarded as a kind of international parliament, from which come the laws which are to regulate telecommunications of every kind. But since this body, which is made up of government representatives from the member countries, holds its conferences at comparatively long intervals, there has to be a certain number of permanent officials whose duty is to see to the application of rules which have been laid down and ensure that the other activities of the Union continue on regular lines.

This is the mandate for the civil servants who work in the Union headquarters building in Geneva, consisting of high-ranking officials, engineers, administrators, secretaries and others.

The I.T.U. can be regarded as the body which regulates, plans, coordinates and standardises telecommunications of every kind. The member countries of the Union undertake to apply the international regulations they have helped to lay down, but each maintains its full sovereignty regarding its own national regulations.

► *One of the objectives is thus to encourage the installation, development and improvement of telecommunications equipment in countries which are still insufficiently equipped, as is the case with Africa. What resources has I.T.U. for carrying out these tasks?*

International cooperation in telecommunications began, of course, when the Union was formed in 1865. During the last 20 years, with a view to the rate of world progress, the form of this cooperation has been fundamentally changed. I.T.U. is now integrated into the family of United Nations organisations and has been extremely active in the United Nations development programme (U.N.D.P.). Over the period 1965-72, 590 experts were sent out on missions, working in them for 17 380 man-months. In addition, 1 399 bursaries were awarded for training courses in foreign countries and 127 countries received assistance through the Union. In Africa, more specifically, the total expenditure on all types of project amounted to \$16 538 000. The chief aims of this aid were to improve the telecommunications infrastructure in developing countries and to remedy the shortage of personnel skilled in this field. The activities designed for these purposes accordingly took the form of projects falling into one or other of the following three categories:

- a) development of telecommunications systems. For Africa an important part of this, which I shall describe further, was the setting up of the pan-african telecommunications system;

* International Telecommunications Union.

b) technical strengthening of telecommunications systems, by the provision of consultative or operational assistance in dealing with problems arising from the planning, or of a technical, administrative, or organisational character, in the countries which apply for it;

c) development of the necessary telecommunications personnel, by setting up vocational training institutes on a national, multi-national or regional basis.

Apart from the share I.T.U. has had in the U.N. development programme, it has taken action on the request of its governing body, the Conference of Plenipotentiaries held at Montreux in 1965, by setting up a group of three telecommunications engineers, which have been put at the disposal of member countries for shortterm missions. During the five years 1968-72, these engineers have been on missions to 51 different administrations.

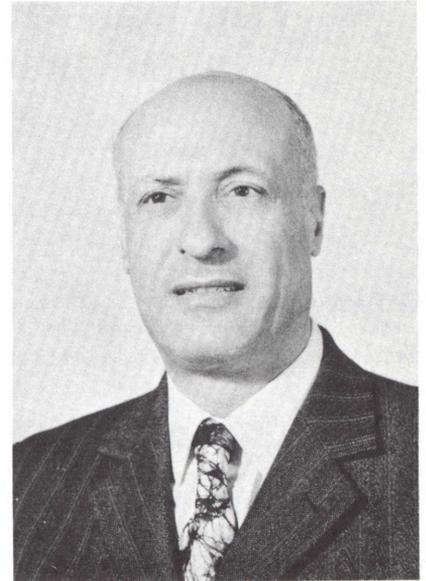
The I.T.U. countries of the Union itself have organised a large number of study courses, such as those in Senegal on telecommunications management techniques and on improvements in the african telecommunications system; in Morocco on space telecommunications as an instrument of progress and cooperation; in Uganda on the problems of telecommunications operation in Africa; in Nigeria on the planning of radio services in Africa; in Kenya on radio-communications planning in Africa; and in the Ivory Coast on the pan-african telecommunications system.

▶ *Apart from technical problems, telecommunications are an instrument of development and economic and political integration, especially in the countries of the Third World. Does I.T.U. endeavour to serve these objectives which, for Africa, are no less important?*

There is a close connection between telecommunications development and economic and social development. In this connection I.T.U. has set up independent specialist groups which have studied a large number of technical problems, the solutions for which have had many consequences in the technical field. The study of these problems was intended to provide developing countries with a basis for making well informed decisions. A number of works have been published on independent national systems, local telephone system, transmission systems, sources of primary energy and the economic studies on a national basis on telecommunications matters. The latter are particularly interesting for developing countries, for they determine the relationship between the G.N.P. per head in any country and the telephone density in the same country. Knowledge of this relationship is of fundamental use in national planning studies. In those countries where economic development is subject to a general plan, or those in which the existing G.N.P. is used for calculating a target G.N.P. at the end of a given period, the relationship can be used to calculate an approximate estimate of the telephone density to be expected.

▶ *Satellite communications are one of the advanced techniques of today and are making a spectacular entry into the african scene. There is, accordingly, a great need for technical staff which the african countries lack. Has I.T.U. any plans for training technicians who will be able to maintain this material?*

For some years ground stations have been under construction both in developed and in developing countries, for the satellite telecommunications service. For this reason I.T.U. was associated with the Indian government in a project, under the U.N.



development programme, for setting up an experimental station for training personnel from developing countries intending to work in a station of this kind. Bursary holders from Africa have been following these courses, and thus securing initiation in these avant-garde techniques. In addition, bursaries have been awarded to enable engineers with higher level qualifications to follow training courses in similar stations operating in the developed countries.

▶ *In 1972, I.T.U. worked out with the african governments a scheme for a pan-african telecommunications system. Does this system appear to you to be a factor of cooperation between the african countries?*

The scheme for the pan-african telecommunications system is an essential factor of cooperation between the african countries. There can be no cooperation without communication. The pan-african system will give the different countries an instrument enabling peoples, businesses and governments to establish closer cooperation links.

A few years ago, but still in our own time, the setting up in the african countries of international telecommunications systems, based solely on their communications with Europe, acted as an obstacle to inter-african cooperation. This was why direct links were set up between various capitals, using the radio-electric decametric-wave technique, and increasing the communications between the countries concerned.

Since 1960, and more especially since 1962, when the planning committee for Africa held its first meeting at Dakar, I.T.U. has been working on studies for a pan-african telecommunications system. In 1964, the O.A.U. and the Economic Commission for Africa took the view that it is of the greatest importance, for purposes of african economic and political cooperation, that the continent should have a real integrated telecommunications system, and that the I.T.U. scheme put forward at Dakar should be carried out forthwith. In 1966, active cooperation was organised between O.A.U., E.C.A. and I.T.U. for the planning and setting up of a pan-african tele-

communications system, facilitating communications of every kind between the african countries without routing outside the continent.

The study undertaken by I.T.U. since 1968, in close cooperation with the governments and with financial help from the U.N.D.P., took into account all the intra-african and inter-continental traffic of the various countries. Once this up-to-date telecommunications system is working, the african countries will have at their elbow all the instrumentation they need for strengthening their cooperation and furthering their development.

► *It is estimated that by the year 2000 the world will have 600 m. telephone subscribers. What proportion of the inhabitants of Africa will then have the privilege of being linked with every corner of the world; and more generally, what are the prospects for telephone development in Africa south of the Sahara, which now has only nine telephones for every thousand inhabitants, against 27 in Latin-America, putting it far behind other parts of the Third World?*

It is difficult at this stage to advance figures for the year 2000. As I said at the beginning of our interview, each country retains its sovereignty and is therefore master of its own telecommunications policy and development. I believe, nevertheless, that with the pan-african system of which I have just spoken, and with the vast economic potential of Africa, the future will see a considerable expansion in the demand for telecommunication facilities in many african countries. They will by then have material available to meet this demand, and will be able to offer top quality service to a continuously growing number of subscribers.

SETTING UP THE PANAFTEL SYSTEM

The Coordination Committee for setting up the Pan-African Telecommunications System (Panafstel) consisting of the Organisation for African Unity (O.A.U.), the African Development Bank (A.D.B.), the Economic Commission for Africa (E.C.A.) and the International Telecommunications Union (I.T.U.) met at the Union office in Geneva on April 10 and 11, 1974. It was formed in May 1973 by the african Heads of State on the occasion of the tenth summit meeting of the Organisation for African Unity, to provide effective coordination and the rapid establishment of a system to cover the entire continent. This system, when it is completed, will comprise some 20 000 km of wide-band connections. According to an estimate made in 1972 the cost should be of the order of \$150 million.

On the question of finance for the project, the coordination committee noted with satisfaction that about 75% of the capital requirements, as estimated, are already available. The additional funds required for the completion of the project should be available shortly.

The coordination committee is at present considering setting up a practical organisation to provide full coordination for the project, from both the technical and the financial standpoint.

► *What part can telecommunications play in developing trade and other exchanges and solidarity between the peoples, and in facilitating aid to regions affected by calamities, such as drought and famine?*

At the world radio communications administrative conference in 1959, which was under I.T.U. sponsorship, the delegates adopted a recommendation that radio telegraph and radio telephone connections should be used by Red Cross organisations. In 1971, at the world administrative conference on space telecommunications, the Union adopted a recommendation, covering the utilisation of the space radio communication system in cases of natural calamity, epidemic, famine and similar critical situations. The Conference thus acted in line with the United Nations request that everything be done to facilitate quick aid in critical situations.

With this in view, I instructed the technical cooperation department of the Union to make a study covering the lack of telecommunication facilities during the period immediately following any natural catastrophe. This study embodied conclusions which made it possible to define the requirements for emergency connections for local zones and regions and for the coordination of international rescue work.

This made it possible to lay down the characteristics for a small portable ground station, which could be quickly loaded into an aircraft and taken to a point near the affected areas, so as to set up as quickly as possible an adequate system of satellite communication with the rescue coordination centre. A contract was placed with a company for a detailed practical study for this station, and the next stage should enable a prototype to be constructed. ■

Interview by L. PAGNI

A glance at Africa's present telecommunications

by Jean MASSON (*)

Diversity and modernism

The striking point about Africa's telecommunications is the great diversity of methods used. All telecommunications techniques are represented, from the multi-couple telephone cable to the satellite. The end of line apparatus, too, covers the entire range, including telephone, telegraph, telex, facsimile and photo-telegraphy, data transmitters and others.

Whereas the installations in Europe and North America reflect progressive adaptation to new techniques as they appear, it has often been possible for Africa to adopt new techniques from the start, including avant-garde solutions over which there might have been hesitation elsewhere.

I. CLASSIFICATION

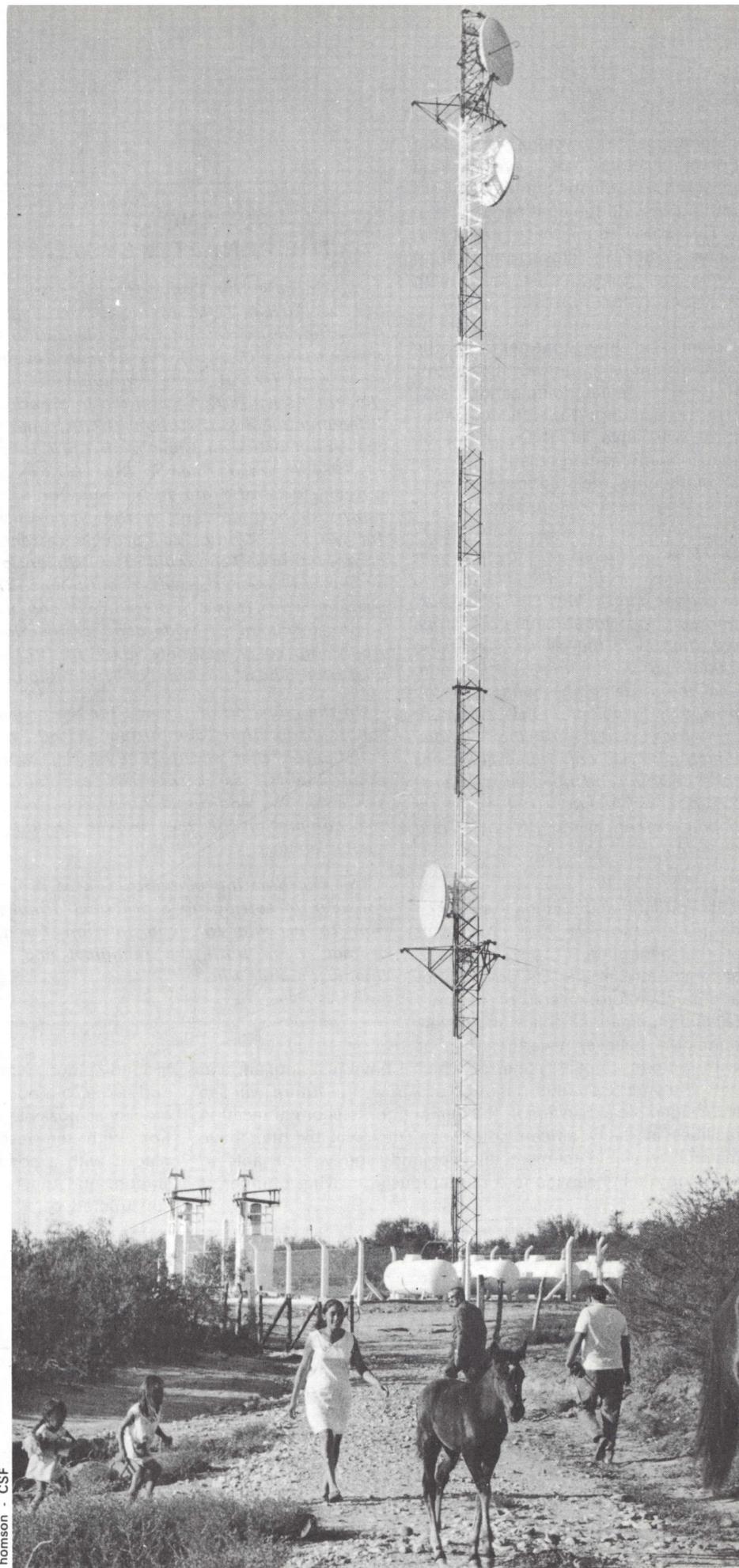
The african telecommunications consist of local and inter-urban systems which are part of the national equipment in each country; inter-State telecommunications and inter-continental telecommunications. To these must now be added mass telecommunication—radio and television—which serve both for entertainment and for education and are also capable of acquiring world dimensions through the use of relay satellites.

On the national scale

For local or inter-urban communications, the form most commonly used is the telephone. There is of course a general tendency for it to become automatic; but only a few of the countries have fully automatic systems. Many have semi-automatic installations and

(*) Head of telecommunications group in the Centre Nationale d'Études des Télécommunications (C.N.E.T.) France; Editor of "Télécommunications".

The hertzian aerials in Cameroon



in a few of the more backward cases only manual systems are available. The telegraph, in its old form, is becoming less important, since it is being replaced by the telex which is fast gaining ground. A considerable number of the african countries have means of interconnection with one another.

Both for telephone and for telex, the connections are of a great variety of types. They include links by multi-couple metallic cables of all kinds, links by coaxial cable and hertzian wave connections, often of very high capacity. Some of the hertzian connections are of the trans-horizon type, which is necessitated in some cases by there being no routes near which intermediate relays can be installed.

It should be mentioned that there exist many connections along the railway lines. In these, too, there are both metallic cable and hertzian links.

In general, the commutation centres are up-to-date. There are many exchanges of the "cross-bar" type in operation, and electronic exchanges are beginning to make their appearance. This applies both to the telephone and to the telex exchanges.

Picture and data transmission

Newspapers and press agencies have up-to-date photo-telegraph equipment and facsimile is beginning to arouse a certain interest. As in all countries engaged in modernisation programmes, data transmission is likely to play an increasingly important part.

Television

Television programmes are broadcast in an increasing number of countries. They come either from transmitting stations which have a hertzian link with the programme production centre, or telecommunication satellites are used. In several countries experimental work is being done on the use of television for educational purposes.

Submarine cables and satellites

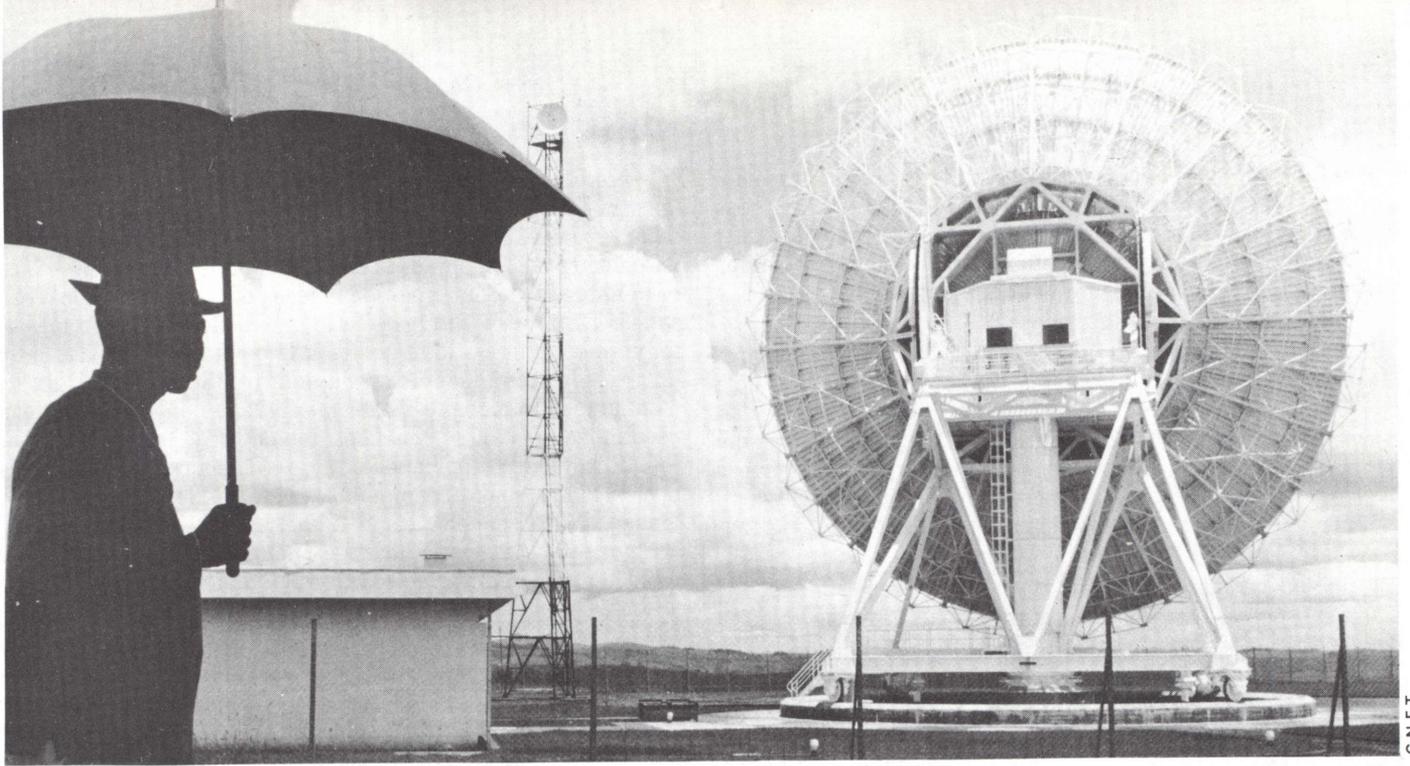
Africa has many telecommunication connections with other continents. These include a number of submarine telephone cables between Africa and Europe. Some of these are high-capacity cables. The current tendency in this field is for large-diameter coaxial cables to be used, with the central conductor consisting of a fine coating of copper on a multi-strand steel cable, and the exterior conductor of a copper sheet rolled upon a solid dielectric. Amplifiers are installed along these cables at regular intervals, which vary from 19.5 sea miles for a cable of 160 channels, to 4.4 miles for one of 3 440 channels.

There are also many radio-telegraphic and radio-telephonic links between Europe and most of the african countries, but there is now another method of connection which seems particularly well adapted to the special requirements of Africa, both national and international. This is the telecommunications satellite. This is said to be geostatic, which means that devices for correcting its position enable it be kept above a fixed point on the earth's surface at an altitude of about 36 000 km. Its chief attraction is that it makes it easy to set up a large number of connections over distances which may be as much as 17 000 km between stations. The connections obtained are of very good quality, comparable with the best which can be made by subterranean cable or hertzian wave. The serviceability of the material is now very good and, for periods of up to seven years, comparable with other methods.

Ease of access determines the points in the coverage area at which ground stations shall be set up. These can communicate both with the satellite and with one another. It is possible for the inter-station contact time to be allocated so that each station transmits short impulses on a common wavelength and the other stations follow successively using the same frequency. Alternatively stations can operate at the same time, each on its own wavelength. It is possible, too, by using several highly directive aerials, to get several of the stations working at the same time on the same wavelength. Moreover, it is extremely simple to modify the configuration of a transmission system as required. In the satellite the transmission channels can be adapted to all types of use, and the adaptation may be permanent or successive. This covers telephony with any specified number of channels, telegraphy, telex, facsimile, data transmission and other uses. The satellite can of course also be used for the re-transmission of television programmes in parallel with its other types of transmission.

An inconvenience often mentioned in connection with the telecommunications satellite is its sensitivity to rain in tropical areas. The importance of this should not be exaggerated. It is true the waves may lose some of their strength in their passage through rain and rain-clouds between the ground and the satellite, and the loss may be increased by passing through a layer of water which may adhere to the protective surface of the aerials. This, however, can be very largely offset by boosting the power input on transmission and the step-up on reception.

Comparisons are often drawn between the respective cost and performance of satellites and submarine cables. It is in fact difficult to compare these two methods of connection, since the ends they serve are complementary. Connection by satellite holds out many kinds of possibility inside the area covered by the transmitting aerials. A special advantage is that it makes it easy to set up new stations with inter-communication between them. The submarine cable is at an advantage when the assignment is to pass a very considerable number of messages between two fixed points located close to the sea, which is the normal pattern in establishing an inter-continental connection. The cost of a cable depends on its length, which is not the case for the satellite; but the increase in its cost is only



Arivonivamo ground station, Madagascar

C.N.E.T

slight with an increase in the number of transmission channels. Since the permitted life of a submarine cable is 25 years, this makes it highly competitive with the satellite system.

It is thus to be expected that the submarine cable will long remain the most economic inter-continental connection, while the future will see the development of satellites with very restricted coverage areas, which will make it possible to exchange a large number of messages which can only be picked up in highly localised areas. The potentialities of these satellites will be increased by the incorporation of aerial commutation devices, amplifiers and memories.

End of line apparatus

We have already noted that telegraphy in its old form, with its well-known variants, is now on its way out. Its work is being taken over by the teleprinter in the form of the telex system, which is developing rapidly.

The telephone of course is growing considerably, and the rising standards of living among the African populations will doubtless lead to a major expansion.

Mention has already been made of the facsimile. This can transmit graphic documents of all types, and should have an assured success because it is easy to use. The use of data transmission equipment, too, is expected to show major developments.

II. CURRENT PROBLEMS: CHOICE OF EQUIPMENT AND PERSONNEL TRAINING

The first problem for Africa in dealing with its telecommunications problems is to choose the equipment for setting up the new connections. At present, as we have seen, it is possible to use very different technical solutions in connections set up for the same purpose. It is for the future users and their advisers to choose the solution best adapted to each particular case, taking into consideration not only the setting up of the connection, but also convenience of operation, ease of maintenance and profitability. The fundamental problem is conditioned by the nature and availability of the power supply.

Much has still to be done in providing for training staff to operate and maintain the equipment. The latter is becoming increasingly complex and the need for keeping it in good operational condition calls for workers with increasingly high technical qualifications. A good deal has already been done in providing training for African operators, but there is still much to do in this field, and still more in training maintenance personnel. There is already a high degree of international cooperation, but this will need to be increased if Africa is to do without foreign technicians in securing the right functioning of its telecommunications.

Apart from these problems of training technicians, which will assuredly be solved before long, Africa seems to have a promising future in its telecommunications. With active international cooperation, Africa should be able, as a young and developing continent, to take its place among the countries which have the most up-to-date and most suitable equipment in the world. ■

J. MASSON

The development of telecommunications and their infrastructure in Africa

by Théodore NOAT*

During the last twenty years there has been considerable progress throughout the world in telecommunications. The pace has been forced by developments in the economy and human relations and made possible by advances in technology.

This progress has left its mark on Africa. The annual statistics of the International Telecommunication Union (I.T.U.) show an appreciable increase during the last ten years, although varying according to country in the number of lines and volume of telephone traffic—factors which may be used for evaluating the development of telecommunications.

In this article we intend to study firstly the factors affecting the development of telecommunications in Africa and their influence upon such development; secondly, we shall describe the existing and future infrastructure of the African network and conclude by making a few remarks on trends in this development.

1. FACTORS GUIDING THE DEVELOPMENT OF TELECOMMUNICATIONS AND THEIR EFFECT

The development of telecommunications is affected by geographical, political, economic and technical factors.

Geographical and political factors

Africa is made up of countries of widely varying size. Average population density is low, but population growth is high. Moreover, large numbers of the rural population are moving towards the towns. To aid communications, towns are spread throughout the habitable areas along the rivers or the coast, but distance between towns is often great. Since independence there has been a very noticeable drive on the part of the African leaders to develop relations in the economic and political fields between countries of the same area.

This structure has affected the development of the African network. Telecommunications have been particularly developed in the major towns, although the rapid growth of these towns has prevented properly phased development of telephone exchanges and networks. A large number of party lines,

extensions, etc., have had to be granted (the ratio of total number of telephones to number of principal lines is often greater than 2:1). Since the distances involved are great, the only way of setting up economic channels of communication was to construct overhead lines or establish radio links. The poor flow of trunk-line traffic along these channels prevented it from being developed further. Since this traffic could not be properly handled, the networks of the small and medium centres of population, where there is little trunk-line traffic, could not be developed.

In addition, the colonial system encouraged links between the parent State and its overseas territories and among neighbouring countries belonging to the same group. A country's possessions were, however, not always adjacent as can be seen in the case of the West-African coast. As a result traffic developed with the parent State or among countries dependent upon the same parent State. As regards infrastructure, gaps in the channels of communication appear at State frontiers: the proximity of large towns in the densely populated areas would have enabled important links to be set up but the economy resulting from geopolitical factors did not support such a development.

Economic factors

Graphs in which telephone density is plotted against income per inhabitant show that the African countries are behind the average for other countries at a similar stage of development. Because of this, as occurred in the developed countries, demand spirals when means are available to meet it. One particular result is a sharp increase in requests for telephone connections and in the volume of traffic entailed. The necessary lines cannot be provided, because exchanges and networks cannot be extended fast enough to keep pace with demand: this is another reason for the vast increase in number of party lines, extensions, etc. The increase in the volume of traffic entailed and the resulting congestion on networks which were not designed for such traffic is another symptom of the spiralling development of demand.

Since the African countries have acquired their independence, traffic between adjacent countries has been tending to develop in parallel with trade, but the existing facilities are being artificially choked and are unable to cope. Telephone traffic is light and not of sufficient volume to enable neighbouring countries to set up, without outside help, telecommunications links which may be immediately profitable. This was realized by I.T.U. which has carried out a general study on the Pan-African network (PANAFTEL) and is attempting to raise the necessary financial aid for this project.

(*) Chairman and Managing Director of SOFRECOM; in French Government service, Mr Noat was Chief Engineer for Transmissions, then Director for Long Distance Lines (now Direction of the National Network).

The effect of advances in technology

Advances in technology have had the greatest effect on the characteristics of the African network. In the developed countries, the infrastructure of the telecommunications network has long been a compromise between requirements and technical (and often, unfortunately, also financial) possibilities. Use has been made in Africa of experience gained elsewhere to skip the intermediate stages by using right from the start the latest equipment and systems. In Africa double 60-circuit 4- and 5-mm diameter copper wire cables have thus never been used because carrier systems enabled necessary extensions to be made on overhead telephone lines. Quad trunk-line cables, which for more than thirty years have been used for the developed countries' trunk connections, have not been laid to any great extent in Africa. Microwave links and coaxial cables were, however, soon adopted for trunk-line networks.

The urban networks were very soon automated, first with common control systems and later with central control-unit recording systems; electronic switches will soon appear in networks where switching and transmission will be integrated into number-based systems.

Mention should be made of the wide use of transistors in telecommunications equipment. The low power consumption of these systems solves the problems involved in supplying power to amplifying stations feeding cable or microwave links in the outback. Furthermore, the reliability of transistorized equipment has made the establishment of unmanned microwave stations possible. Where coaxial cables are used, the possibility of remote power supply for amplifiers from distant stations has produced a convenient solution to the power supply problem. Finally, improvements in coaxial submarine

telephone cables of various capacities and the development of satellite telecommunications have provided a solution to problems arising in intercontinental and long-range regional communications, previously carried out by conventional radio links. In this respect, Africa has not lagged far behind the European and North American continents, since several space stations are in operation.

A study of the factors which have guided the development of telecommunications in Africa would be incomplete if no mention were made of the influence of the I.T.U., its telephone and telegraph committees (C.C.I.T.T.) and its radiocommunications committee (C.C.I.R.). The African countries have strictly abided by the recommendations made by that organization in plans for transmission, numbering, signalling and routing. Although these plans were established for international traffic the quality of that traffic is determined in the first place by that of the national networks, the starting point and final destination of such traffic. The following is a brief reminder of the objectives of these plans.

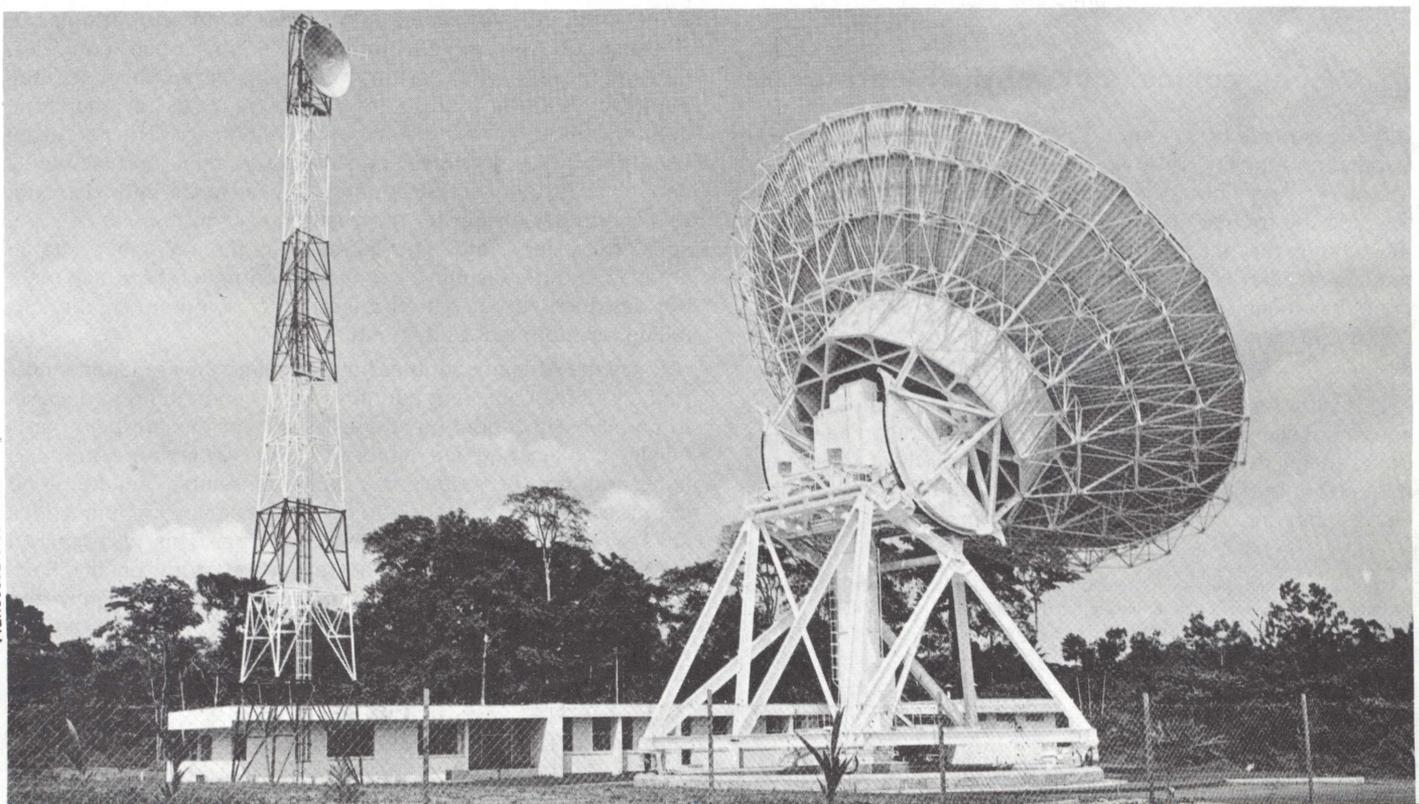
The transmission plan defines a rational distribution of attenuation between the elements of a telephone link: the subscriber's telephone and line, circuits and switches.

The routing plan defines the routes which may be taken by a telephone communication; any connection made following this plan is compatible with the transmission plan, which is a guarantee of its quality; furthermore, this plan is established such that all connections are calculated with a low loss probability. The plan is the result of economically optimizing the system constituted by the whole of the trunk network.

The numbering plan enables the allocation of individual telephone numbers with a minimum number of digits and facilitates routing by the appropriate selection of codes for different areas.

Ground station at Libreville (Gabon).

Intelsat has provided a number of geostationary (fixed orbit) satellites for the countries that use them.



The signalling plan defines the code which produces the electrical signals that are exchanged along a link during a communication, and also for making and terminating that connection. Finally, a telephone charges plan fixes the cost of calls according to distance and possibly duration.

At its meetings in Addis Ababa and Lagos, the Planning Commission for Africa laid down the conditions for applying these numbering and routing plans for Africa. The world-wide numbering plan was complemented by simplified area plans to enable calls to be made between two numbers in the area by using a code containing fewer digits than in the telephone number of the person called.

At the Tunis meeting, the African countries agreed to use a single signalling code, code R2, in their regional calls; this code has frequently been adopted in national networks.

Application of the world routing plan to Africa deserves fuller attention. This plan provides for connections being made automatically between subscribers in two countries by means of a maximum number of five international circuits (exceptionally six). The maximum number of switches operating in the link is therefore six including the outgoing and incoming switches of the countries making and receiving the call. These incoming and outgoing switches are called CT3. The plan lays down a hierarchy of relay centres, the CT1 and the CT2. All CT3's are linked to at least one CT2, all CT2's to one CT1. The CT1 are all interconnected. The most complicated communication is established along the chain: CT3, CT2, CT1, CT'1, CT'2, CT'3. There is normally one CT1 per continent.

At its meetings in Addis Ababa and Lagos, the Planning Commission for Africa specified the CT2's and CT3's for the African Continent. However, it was unable to lay down a CT1 for that Continent, since no centre has a sufficient volume of traffic with all the other CT2's to justify economically setting up circuit beams with these CT2's. It therefore nominated Paris and London as CT1's, the African CT2's being linked to one of these centres according to the tendency of their traffic. However, in agreement with an OUA recommendation, these Planning Commissions recommended "the Africanization of African regional traffic", that is to say, they hoped that regional communications would be routed solely through African relay centres. Such a resolution could not have been applied without the advent of space telecommunications. The impossibility of linking up some CT2's of different areas would have prevented the handling of all regional communications by means of CT2-CT2 or CT2-CT2-CT2 links, the type authorized by a change in the routing plan. Some links would have continued for a long time to be established by London or Paris and sometimes even by London and Paris.

Bringing ground stations into service enables relay from another continent to be avoided, provided the following conditions are met:

— The CT2's must have an aerial beamed at the same satellite, since links made by means of two satellites are prohibitive because of the length of transmission time (of the order of one second), which creates disturbances, similar to those caused by echo in the case of sound transmission, in spite of the insertion at suitable points in the link of echo suppressors. It will be noted that this condition is not met at present since aeri-

are beamed either at Intelsat III satellite, position Atlantic (Nigeria Station), or at Intelsat IV, position Atlantic (stations in Senegal, Ivory Coast, Gabon and the Malagasy Republic), or at Intelsat III, position Indian Ocean (Kenya station).

— The other condition is that circuits must be beamed between two African CT2's through the same satellite. It is not economically possible to establish a permanent beam by satellite between two CT2's which would together handle a low volume of traffic, but present technology enables temporary links to be established via a satellite (SPAD system) between two centres, the satellite acting as a switch. To justify setting up a beam of circuits, the whole of the long-distance international traffic towards the CT2's must be considered: such beams can easily meet the criterion of economic profitability.

The erection of new aeri-als at the ground stations and the construction of new stations linked to the CT3's will encourage the Africanization of regional traffic.

2. INFRASTRUCTURE OF THE AFRICAN TELECOMMUNICATIONS NETWORKS

Owing to the factors examined above, the development of telecommunications has been very irregular in the African countries. In the 10 years between 1962 and 1972, the number of lines was multiplied by 1.9 in Nigeria, 2.3 in the Congo and 6.2 in the Ivory Coast. As regards regional networks, the various countries were unable, without outside help, to design and construct the regional links planned by the Addis Ababa and Lagos Planning Commissions. The General Secretary of the I.T.U., who wished to see such a regional network in Africa, instigated a study which was financed by U.N.D.P. funds and carried out by engineering firms. The result was the PANAFTEL network, described below. The countries were divided into three areas—West, Central and East Africa. The infrastructure of the national networks of these countries linked to the E.E.C. by the Yaoundé Convention will also be described in this section.

Maps of the telecommunications networks for these areas show existing infrastructure and that planned up until 1980. The main features of the PANAFTEL network for the three areas have been summed up in tables which also give the estimated cost of work. (1).

West Africa

This area groups those countries on the Atlantic Coast between Mauritania and Nigeria, plus Upper Volta, Mali and Niger. The French-speaking countries of this area (except Guinea) have signed the Yaoundé Convention. National facilities in these countries only will be listed there.

The Planning Commission, meeting in Lagos in 1971, stated that routing would be through CT2's in Abidjan, Dakar and Lagos, all of which were either in service or on order. A CT3 is planned for each country but none is so far in service.

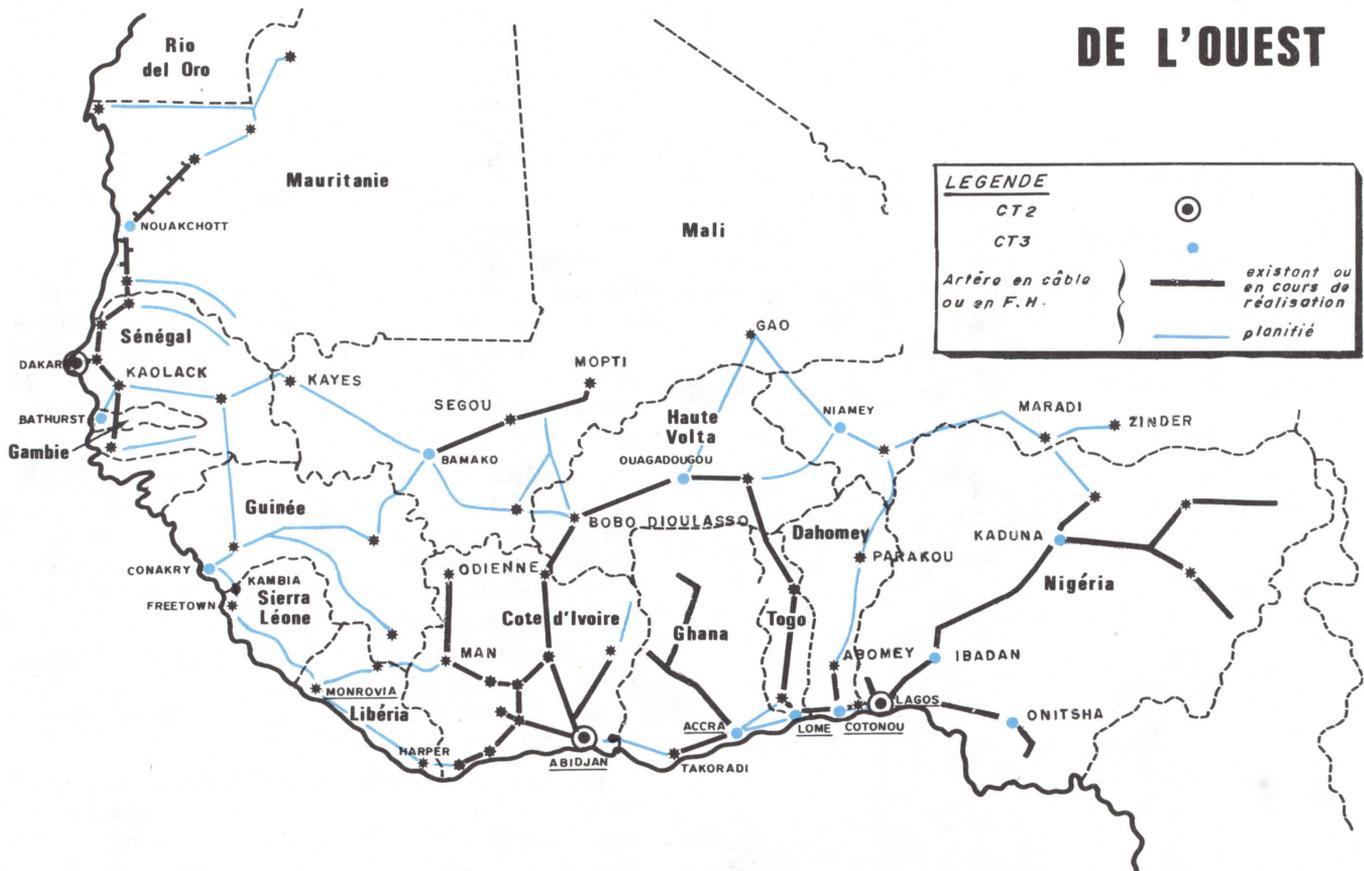
Ground stations have been put into service in the past two

(1) This estimate is given in French francs (FF), at the rate of FF 5 to one US dollar.

Table 1
West Africa

Countries	Switching stations	Number of circuits or lines	Amount in FF millions	Long-distance links	Type	Amount in FF millions	Remarks
Ivory Coast				Man Liberia (via Mt Nimba) Abidjan - Ghana San Pedro - Liberia Korhogo - Mali	MWL (1) MWL Rh (2) MWL	0.55 2.60 4 2.5 4	{ direct link or via { Danané
Dahomey	Cotonou CT3	244	3.35	Bohicon - (Niger) Cotonou - (Togo) Cotonou - (Nigeria)	MWL MWL MWL	11.83 3.6 *	in progress (French aid) Cotonou/Porto-Novo sections in progress. (* For estimate see Nigeria)
Gambia	Bathurst CT3	84	2.03	Bathurst - Senegal (via Kaolack)	MWL	0.49	-
Ghana	Accra CT3	63	2.60	Accra - Takoradi Accra - Togo Accra ground station	MWL MWL	9 2.35 4.4 19.47	via the interior (Togo prefers this) via the coast
Guinea	Conakry CT3	62	2.80	Conakry - Senegal Conakry - Kankan Kankan - Mali Kankan - N'Zérékoré Conakry - Sierra Leone	MWL MWL MWL MWL MWL	4.5 14 2.2 8.5 1.2	ADB financing envisaged for these links.
Upper Volta	Ouagadougou CT3 (in progress)	150	2.27	Bobo - Dioulasso - Mali Koupéla - Niger Ouagadougou - Koupéla - Togo	MWL MWL MWL	2.20 6.70 14*	Ouagadougou/Koupéla section planned with French aid. French aid being provided * for all the work
Liberia	Monrovia CT3	49	2.25	Monrovia - } via Mont Nimba (Ivory Coast) } Monrovia - (Sierra Leone)	MWL MWL and Rh MWL	7.28 7.04 2.58	
Mali	Bamako CT3	182	2.24	Bamako - (Senegal) Bamako - (Guinea) Bamako (Upper Volta) Bamako - Segou - Mopti	{ MWL or { coaxial MWL MWL MWL	14 1.80 14 8.15	
Mauritania	Nouakchott CT3	172	2.50	Akjoujt - Atar Atar - Choum Nouadhibou - Choum Choum - Zouerate Rosso - (Senegal)	coaxial MWL coaxial MWL coaxial	8.42 16.89 0.81	Additions to State work in Senegal and Mauritania
Niger	Niamey CT3	154	2.60	Niamey - (Upper Volta) Dosso - (Dahomey) Maradi - (Nigeria)	MWL MWL MWL	1.93 6.40	Estimate being made (260 km)
Nigeria				Lagos - Porto Novo Kano - (Niger)	MWL MWL	3.63	-
Senegal				Kaolack - (Mali) Kaolack - (Gambia) Richard Toll (Mauritania)	MWL or coaxial MWL coaxial	14 2 0.3	
Sierra Leone	Freetown CT3	28	1.60	Freetown - (Liberia) Freetown - (Guinea)	MWL Rh or MWL	5.07 1.27 2.25	via Kambia
Togo	Lomé CT3	94	3.90	Lomé - Ghana Lomé - Dahomey Lamakara - Upper Volta	MWL MWL MWL MWL	0.76 0.80 *	via interior (Ho Palimé) Togo wants alternative link via coast Shortly in operation (French financing - FAC) * (For estimate see Upper Volta)

- (1) MWL Microwave link - line of sight.
(2) Microwave link - radio-horizon.



years in Abidjan (Ivory Coast) and Dakar (Senegal), beamed on Intelsat IV, position Atlantic, and in Lagos (Nigeria), beamed on Intelsat III, position Atlantic; a second aerial beamed on Intelsat IV, position Atlantic, is also planned for the Lagos station. A study has just been made on a ground station in Ghana.

The laying of an under-sea cable between Casablanca, Dakar, Abidjan, and possibly extended towards Lagos and beyond, is envisaged in the coming years.

Work on the PANAFTEL network in this area is summed up in table 1.

National facilities

IVORY COAST. At the end of 1972 there were 35 140 lines, of which 32 619 (93%) were automatic, and a total number of 40 531 telephones (including party lines, extensions etc.) i.e. 0.008 telephones per head of population. There were 1.15 more telephones than lines in 1972 as against 1.87 in 1962, lines having been increased by a factor of 6.2 over ten years. There were 466 telex terminals at the end of 1972.

The infrastructure comprises a group of micro-wave links joining Abidjan with the other main towns and there are some twelve automatic stations outside Abidjan.

Development of the Ivory Coast network is as follows:

Programme for 1971-73

Extending the Abidjan network (15 500 lines) and the trunk relay station; building an urban relay station and extending

networks; micro-wave links between Agboville and Abengourou; Agboville and Dimbokro; Abidjan and Dabou; Korhogo and (Upper Volta). Estimated cost of the programme is FF 55 000 000, partly financed by French aid.

Programme for 1974-78

Extension of existing exchanges plus four new exchanges in Abidjan, giving 28 000 lines in all; building or extending 27 automatic exchanges in the interior; extending the Abidjan trunk relay station; setting up of two 100-line telegraph switchboards in Bouaké and San Pedro; micro-wave links between Abengourou and Bondoukou, Daloa and Danané, Abidjan and Aboisso (Ghana), San Pedro and Soubre Buyo, Tabou and Ghatou.

Work and supplies for the 1974-78 programme, estimated at FF 222 000 000, and partly financed by I.B.R.D. aid (US \$ 25 million).

DAHOMÉY. At the end of 1972 there were 4 072 lines, of which 3 342 automatic, and a total of 7 787 telephones (including party lines, extensions, etc.), i.e. 0.0028 telephones per head of the population. There were 64 telex terminals.

The infrastructure of the network comprises micro-wave links between Ouidah, Cotonou and Porto Novo, and Ouidah and Abomey.

National programmes include plans for new exchanges in Cotonou (1 200 lines), completing the automation of stations in prefectures and gradually automating stations in sub-prefectures.

UPPER-VOLTA. Figures for 1972 are not included in I.T.U. statistics.

National programmes include plans for

— a new exchange in Ouagadougou (5 000 lines), a CT3 and the automation of 4 stations (800 lines). The estimated cost is FF 28 000 000, to be financed partly from I.D.A. funds;
— micro-wave links between Bobo Dioulasso and Mali, and Ouagadougou and Ghana (cost FF 4 700 000) and a connection between Ouagadougou and the Liptako Gourma (450 kms, cost still to be determined).

MALI. Figures for 1972 are not included in I.T.U. statistics.



Touba radio relay (Ivory Coast).

National plans are for extending and automating 5 stations in Bamako, and constructing micro-wave links between Bamako, Ségou and Mopti. The work is already under way and will cost FF 21 400 000 to be financed partly from I.D.A. funds. There are also plans for a micro-wave link between San Koutiala and Sikasso and a station in each of these towns (600 lines) at a cost of FF 11 300 000 and for connecting these micro-wave links with Upper Volta (FF 1 200 000 for the section in Mali) and Ivory Coast (FF 3 000 000), and connecting Bamako with its airport (FF 1 800 000).

MAURITANIA. Telecommunications facilities at the end of 1972 were 1 429 lines, of which 1 234 were automatic, 6 365 telephones (including party lines, extensions etc.)—which seems quite high—and 52 telex terminals.

On completion of the work now being carried out, the infrastructure of the network will comprise a coaxial cable linking Rosso, Nouakchott and Akjoujt, 6 600 automatic lines in these

three towns, and a 90-line telex exchange. The number of automatic lines actually connected immediately after the work will be 4 800. Total cost of the work will be FF 19 200 000, financed by the Kreditanstalt.

A.D.B. financing is planned for telephone installations on the right bank of the Senegal river.

NIGER. The only long-distance link is a 24-channel micro-wave link between Niamey and Dosso. There are 4 100 automatic lines from stations in Niamey, Maradi and Zinder. Projected work is for increased facilities in Niamey (cost FF 3 000 000) and a micro-wave link between Niamey and Zinder including a TV channel, a telephone channel and a relief channel. Estimated total cost is FF 32 000 000.

SENEGAL. At the end of 1972 there were 11 176 lines of which 9 934 (88%) were automatic. The total number of telephones (including party lines, extensions etc.) was 29 745, i.e. 2.6 times the number of lines. There were 293 telex terminals. The expansion rate between 1967 and 1972 was fairly low (a factor of 1.15), with an annual increase of 3%.

The infrastructure of the network comprises a cable between Dakar and Thiès and a micro-wave link between Thiès and Ziguinchor. There are automatic stations in Dakar, Thiès, Ziguinchor, Kaolack and Diourbel.

A programme of work costing FF 8 900 000, partly financed by I.B.R.D. loans, is being carried out. It includes two new exchanges in Dakar (4 300 lines initially, but with a total capacity of 20 000); a 900-channel micro-wave link between Dakar, Thiès and Saint Louis and a 60-channel link along the left bank of the Senegal river from Richard Toll to Bakel; 8 automatic exchanges on the main link to the north. There will be 17 000 lines connected on completion of this work.

There are plans for extending the network via Ziguinchor and Velingara to Casamance at a later stage.

TOGO. At the end of 1972 there were 4 969 lines of which 3 488 (70%) were automatic. The total number of telephones (including party lines, extensions, etc.) was 6 144, two-and-a-half times greater than in 1962.

The infrastructure consists of two links at right angles to each other—an east-west link along the coast and a north-south link from Lomé to Lamakara, which has just been brought into service. In all, 5 700 automatic lines have been, or are being, connected. Eight stations, in addition to Lomé, will be automated.

Projected work involves increasing facilities at the Lomé exchange (10 000 lines) and will cost FF 25 000 000.

Central Africa

This area includes Cameroon, Equatorial Guinea, Gabon, the Central African Republic, Chad and Zaïre. Burundi and Rwanda, which could be incorporated in East Africa, are included in this area. With the exception of Equatorial Guinea, all the countries of this area are linked to the E.E.C. by the Yaoundé Convention.

The Lagos Planning Commission has designated Yaoundé and Kinshasa as CT2's for routing international traffic. The

**Table 2
Central Africa**

Countries	Switching stations	Number of circuits or lines	Amount in FF millions	Long-distance links	Type	Amount in FF millions	Remarks
Cameroon				Yaoundé-Ebolowa Ebolowa - Gabon Yaoundé - Sangmelima		5.44 2.08 1.42	
Congo	Brazzaville CT3 local stations in Djambala Gamboma Fort Rousset Makoua Ouesso Impfondo	135	1	Brazzaville - Ouesso Ouesso - Impfondo Ouesso - (Central African Republic) (via Berberati) or Impfondo - (Central African Republic)	MWL (1) Rh (2) Rh Rh Rh Rh	19.40 18.06 6.96 1.94 1.94 1.94	{The Congo would prefer the first of these two alternatives { see Central African Republic below
Gabon	Libreville CT3			Bitam - (Cameroon)	MWL	0.20	
Central African Republic	Bangui CT3 local stations in Bossangoa, Bozoum, Paoua	85	1.1	Berberati - (Congo) Bangui - Congo via Impfondo) Bouar - Paoua Paoua - (Chad) Bossemele - Paoua	Rh Rh MWL MWL MWL	3.4 2.9 5.28 0.29 8.32	{The States recommend the Impfondo solution the Bangui - Bossemele - Bouar micro-wave link is under construction (financed by Eximbank)
Rwanda	Kigali CT2			Kigali - Cyangugu Kigali - Gisenyi Cyangugu - (Zaire)	MWL MWL MWL	3.85 0.45 0.30	national facilities
Chad	Ndjamena CT3 local stations in Goré, Bongor	94	1.3	Ndjamena - Moundou - Sahr Moundou - (Central African Republic)	{ MWL coaxial cable MWL	20 20.28 2.55	
Zaire				Bukawu - (Rwanda)	MWL	0.19	

(1) MWL micro-wave link - line of sight.
(2) Rh micro-wave link - radio-horizon.

Yaoundé station is already in service but the Kinshasa station, which according to the Lagos plan was to start functioning in 1975, has not yet been ordered. The same plan included a CT3 for each country. There are ground stations in Yaoundé (Cameroon), Libreville (Gabon) and Kinshasa (Zaire).

PANAFTEL network

Table 2 sums up the plans for this network.

National networks

CAMEROON: At the end of 1972, there were 10 335 lines, of which 9 724 (94 %) were automatic. Total number of telephones (including party lines, extensions etc.) was 21 317, i.e. 0.0036 telephones per head of population. The ratio of number of telephones of all types (including party lines, extensions, etc.) to number of lines is very high. There were 300 telex terminals in service at the end of 1972.

A long-distance east-west micro-wave link connects Douala and Yaoundé and continues northwards across the country. There are some fifteen automatic stations outside these two towns. Work in progress includes increasing facilities at the Yaoundé and Douala relay stations and the construction of 6 new automatic stations; when these facilities are completed there will be 17 000 automatic lines in service.

The second stage of the plan includes:

— A micro-wave link between Douala and Bafoussam serving 9 areas, bringing into operation 17 small or medium-sized exchanges and increasing facilities at Douala and Yaoundé. The total cost is estimated at FF 90 000 000.

— A micro-wave link between Yaoundé, M'Balmayo, Ebolowa and Sangmelima, extending the existing micro-wave links and bringing into operation 6 automatic exchanges at the Bafoussam central exchange. This work will cost FF 62 000 000.

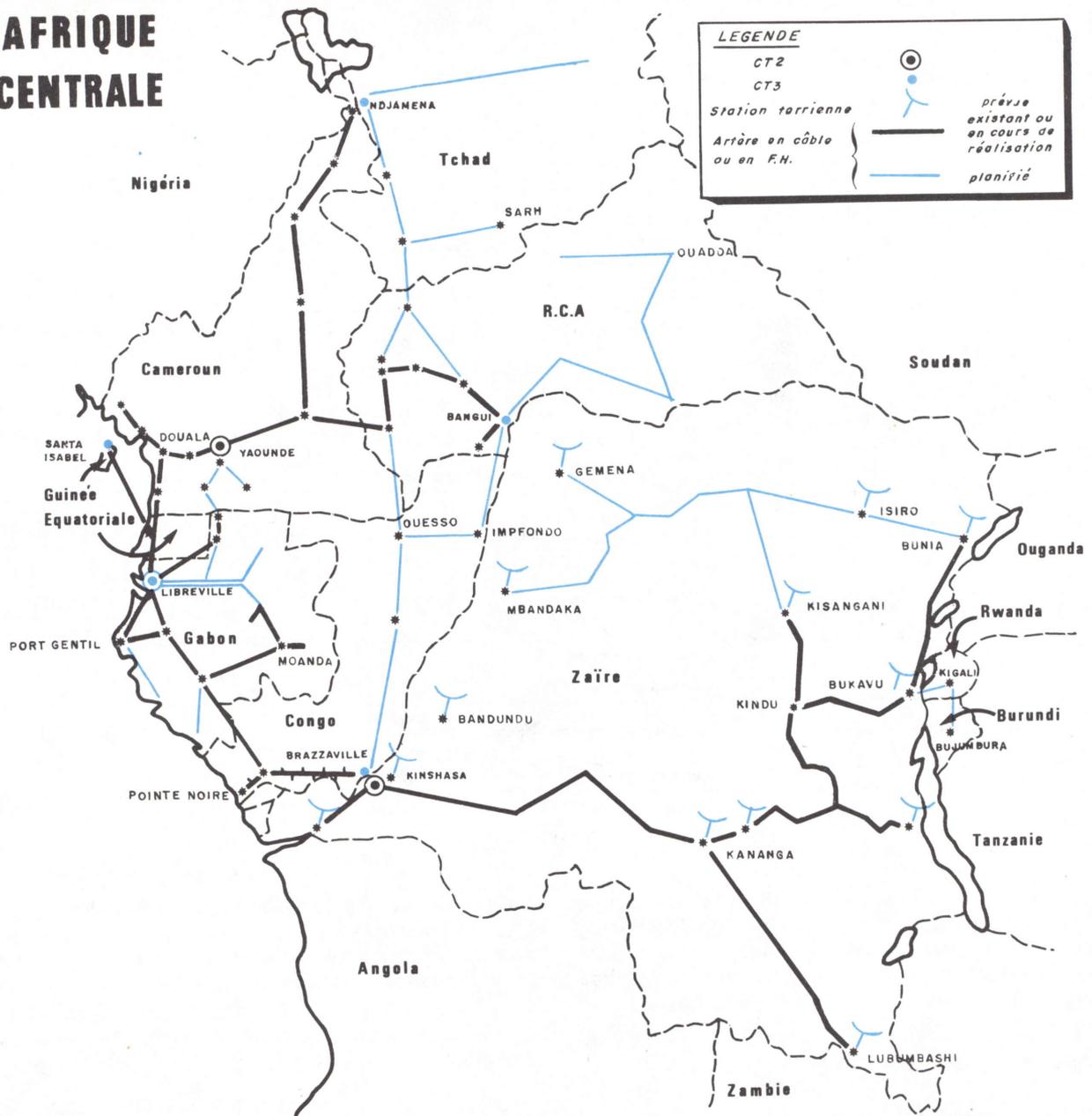
— Extending the micro-wave links to the North, including a branch to the Central African Republic. This will cost FF 24 000 000.

CONGO: At the end of 1972 there were 5 545 lines, of which 4 700 were automatic, a total number of telephones (party lines, extensions etc.) of 10 606, i.e. 0.0084 telephones per head of population. There were 105 telex terminals in service.

Existing infrastructure consists of a coaxial cable between Brazzaville and Pointe Noire and a micro-wave link, between Congo (Dolisie) and Gabon (financed by the E.D.F.).

Work in progress consists of automation of the Brazzaville-Pointe Noire link, including increased facilities in the Brazzaville and Pointe Noire stations and automation of five stations, covering 8 500 lines in all. The whole operation, including buildings and extensions to the local networks, is estimated at FF 17 300 000 and is being partly financed by French funds.

GABON: At the end of 1972 there were 6 000 lines, almost all of which were automatic, and 18 000 telephones in all (including party lines, extensions etc.), the last figure being very high. The growth rate between 1962 and 1972 was particularly rapid (increased by a factor of 7.4 according to I.T.U. statistics). There were 117 telex terminals.

AFRIQUE
CENTRALE

There is—or will be in the coming months—a micro-wave link infrastructure joining the country's main towns:

Libreville-Port Gentil,
Lambarené-Mouila (Congo),
Mouila-Moanda-Franceville,
Libreville-Lambarené-Port Gentil (work being done jointly by the television and telephone companies),
Libreville-Oyem-Bitam,
Libreville (Cameroon),
Moanda-Lastourville-Koulamoutou (work being done jointly by the television and telephone companies).

Other joint television/telephone micro-wave links are planned between:

Libreville-Ndjolé-Booué-Makokou,
Ndjole-Oyem-Bitam (new route),
Booué-Lastourville,
Mouila-Tebibanga-Mayumba,
Port Gentil-Gamba.

As for switching, there is work in progress on increasing facilities in Libreville and on bringing 8 automatic stations into operation, which together will deal with a total of 4 500 lines. On completion of this work (estimated at FF 28 000 000), there will be 9 700 automatic lines.

CENTRAL AFRICAN REPUBLIC: No figures for this country's telecommunications network are given in I.T.U. statistics for 1972. Work in progress (estimated at FF 30 000 000 and financed from Eximbank funds) includes micro-wave links between Bangui and Boali, and between Bangui, Bouar and Berberati, and new exchanges in the latter three towns. On completion of the work, there will be 11 000 automatic lines. Phase two plans (estimated at FF 75 000 000) are for a micro-wave link between Bangui and N'Délé via Bangassou and Ouadda.

CHAD: I.T.U. statistics for 1972 show 2 400, mainly automatic lines, and a total of 4 992 telephones (including party lines, extensions etc.), giving 0.0013 telephones per head of the population. There were 51 telex terminals.

The E.E.C. - A.C.P. negotiations

Two further sessions were held in Brussels on May 11 and 24, 1974, between the negotiators of the European Nine and those of the A.C.P. (african, caribbean and pacific) countries.

This was the third phase of the negotiation, and the main part of the discussion was devoted to trade questions and to financial and technical cooperation. On the trade side, the partners reached agreement on free access to Community markets for the main part of exports from the A.C.P. countries, except for special arrangements to be made for specific products connected with the Community's joint agriculture policy. Questions of financial and technical cooperation were being considered by an E.E.C.-A.C.P. working party, which drew up a first draft, covering the main aspects of the programme and the administration and management of the aid.

There are still differences of view under both heads. The next stage of the work on trade problems will have a number of other points to cover, as well as the system to be applied for agricultural produce. These include the rules of origin questions, in so far as A.C.P. interests need to be taken into account in working out the Community programme for harmonising the national legislations on non-tariff obstacles, or in the Community trade policy with third countries, or in matters of trade promotion. There must also be discussion on the problem of the instability of receipts to the A.C.P. countries for the export of various basic products. At the meeting of the plenary Committee of Ambassadors and plenipotentiaries on May 24, the latter problem was the subject of a statement by the spokesman of the A.C.P. countries, setting out the ideas of the Community's partners in this special field.

A number of other questions will have to be tackled later, including access for Community products to the markets of A.C.P. countries. On the question of financial and technical cooperation, a point to be covered in the future work is the system allowing the A.C.P. countries to take part in various stages of the aid decision machinery. Discussions may also be put in hand about the general criteria to be taken into account in fixing the volume and terms of the aid.

The discussion on industrial cooperation has so far consisted only of statements of principle of no particular depth. The A.C.P. partners have intimated their special concern in this matter, regarding it as a primary element of the cooperation and a method of promoting their independence and economic development on which they intend to base their

Joint Committee meets at Dinard (May 27-30)

Under the Yaoundé Convention, the meetings of the Association parliamentary institutions are held alternately in Europe and in Africa.

The spring 1974 meeting of the Joint Committee, which reports to the Association parliamentary Conference and consists of 19 representatives from the Associate countries and the same number of members from the European Parliament, had therefore to be held somewhere in Europe. Since so many cities regard it as an honour to be hosts to the parliamentarians, there is always competition to be chosen; but in this case the choice was easy. A year ago the former french Minister and Secretary of State for cooperation, Mr. Bourges, had proposed the city of which he is mayor, and which lies in the constituency for which he sits in the french National Assembly. This was the breton city of Dinard and the suggestion was accepted with very little discussion.

This was a good opportunity of getting to know the breton resort, which was still quiet in this before-season period, but already bustling with preparations for the summer season. The Balneum had been converted into a congress palace; and the staff of the European Parliament, which looks after the logistic side of these meetings had, as usual, made a good job of setting up the conference halls and offices.

All this, however, was no more than

future relations with the Community.

At the next resumption of the negotiation, too, work will have to continue on the rules governing the right of establishment and the rendering of services, and on current payments and movements of capital.

At the request of the A.C.P. countries the negotiations were temporarily suspended to enable them to report to their ministers, at their meeting at Dakar on June 4-6, 1974.

In the meantime the E.E.C. Commission is to put forward to its Council of Ministers a recommendation, with draft additional negotiation directives relating to trade cooperation and institutions. Since a number of important questions have still to be negotiated, a maximum effort is called for in the next stage of the discussions, so that the basic questions under negotiation may be settled by the end of July 1974. The importance of this deadline lies in the arrangements now in hand for the A.C.P. countries to propose an E.E.C.-A.C.P. conference at the level of ministers to be held at the end of July, probably at Kingston (Jamaica). ■

the framework. Much more important was the work of the Committee; and in this one subject prevailed over all others—the future of an Association on the point of being enlarged.

Seldom has there been so intensive or so frank a discussion between the Joint Committee and the E.E.C. Commission or Council of Ministers.

At the outset there was an atmosphere of concord, for the parliamentarians were in broad agreement among themselves on the future content of an enlarged Association. This was to stand them in good stead when it came to drafting the final declaration, which was achieved with record speed. The Chairman and Deputy Chairman, Mr. Kasongo Mukudji of Zaire and Mr. Maurice de Wulf of the European Parliament, handled the meeting with exemplary skill.

The drafting, however, was not to happen before crucial points of conflict had come into the discussion and crucial disappointments been expressed. It was when the Joint Committee heard the statements made by the Commission and the Council of Ministers, that these came to the surface.

For the Commission, Mr. Claude Cheysson, the Commissioner responsible for cooperation and development, arrived post haste at the end of the first day. The statement he made to the parliamentarians was a matter of astonishment to the Africans, for it was manifestly

intended to disillusion them about the obligations Europe might be willing to assume in the enlarged Association. Mr. Cheysson wanted the African partners to understand that the European Community could not by itself solve all the problems of development, which must in fact depend on solutions to be adopted on the world scale. In this he was referring largely to the proposals for

tarians. It was coloured by a certain artificial suavity, glossing over the really thorny problems and seeming to bathe the whole discussion in a rosy optimism. The parliamentarians, having slept through this speech, proceeded to put precise questions to the Minister, calling on him to explain the definite ideas of the Council in Europe for pushing forward the negotiations towards an

enlarged Association. He stood up courageously to these questioners, admitting that on specific points the political choice had yet to be made, but committing himself to bring forward Council decisions which would be decisive contributions to the pursuit and rapid conclusion of the Association negotiations. It is now certain that the common denominator of the reciprocal undertakings will be somewhat smaller than the existing Associates had hoped, though it will guarantee to the 19 countries the maintenance of the advantages they already enjoy.

After the departure of Mr. Vichniewsky, the final declaration was not delayed. It reflects the atmosphere of the meeting, and the concern felt by the parliamentarians. The full text is given opposite.

This was not the whole story. Outside the schedule of parliamentary work, the French Ministry for Foreign Affairs had organised a visit for its guests to Mont St. Michel. This was a major event, for the rock is one of the wonders of the West, a fine survival of the Middle Ages and a place of pilgrimage alike for French and English. It had opened its churches, its halls and its cloisters for a reception, the like of which has never happened since the Abbey was secularised in 1790. In the gathering dusk the visitors heard a concert of



From left to right: Messrs. Kasongo Mukudji (Commission president), De Wulf (vice-president) and Eholié.

stabilising the export receipts of future Associates; and it was obvious that ambitions do not now run so high as they did a year ago when the Commission first put forward its proposals in the Deniau memorandum. After this, speaking specifically to the existing Associates, Mr. Cheysson urged that, now the unity of the associate countries in Africa, the Caribbean and the Pacific is an established fact, they must not hope to take their fingers out of the pie and follow the execrable maxim of "each for himself", which has already done so much harm in Europe.

When the first emotion of the Africans had subsided, the meeting set to work to lay down the possible objectives and put them into the text of the final declaration. With or without the timetable which calls for the new Association to be ready by January 31 next, the possible objectives are, a quick definition of industrial cooperation; fixation of the amount of the E.D.F.; solution of the problem of free access to the Common Market for the agricultural produce of Associated countries; and a form of support for the export receipts for basic products in Associated countries, among which sugar takes a special place.

Even then, before a text could be finalised, the meeting had to hear the views of the Council of Ministers. Speaking on behalf of the Council was Mr. Vichniewsky, the German Secretary of State for Foreign Affairs, who arrived from Bonn in a special aircraft. His first statement disappointed the parliament-

FINAL DECLARATION

The Joint Committee of the parliamentary Conference of the E.E.C./A.A.S.M. Association, meeting at Dinard on May 27-30 1974,

— having heard the E.E.C./A.A.S.M. Council of Association, and the Council and Commission of the European Communities, on the state of the negotiations between the enlarged Community and the countries of Africa, the Caribbean and the Pacific;

— recognising that progress has been made in defining the respective positions of the parties, regarding the new prospects for the Association, the definite outcome of which is still intangible;

— convinced of the existence of political will for the conclusion of a general Convention comprising sections dealing with the commercial aspects, technical and financial cooperation and the institutions;

— emphasising the importance of measures relating to safeguarding the interests of countries, the economies of which depend on the export of basic products, especially sugar;

— recalling to the Council of the Communities, and to the governments of the member countries, the precise undertakings formally contracted towards the countries of Africa, the Caribbean and the Pacific in the Treaty of Adhesion and at the Summit Conference in Paris;

— convinced that despite the serious difficulties currently besetting the E.E.C. and its member countries, fidelity to the policy of Association in a renewed and enlarged form, will be a feather in the cap of nine-nation Europe in the world at large,

- expresses its disquiet at the slowness of the current procedure and the resulting danger that there may be further delays;

- hopes that the member countries of the European Economic Community may overcome their momentary difficulties, strengthen their cohesion and seek means for developing the Association, which ranks as one of the most important aspects of Community achievement;

- urgently appeals to the European Community to determine, in the very early future, the political decisions which will enable it to lay down in precise terms the content of its Association offer, and thus to accelerate the negotiation;

- particularly requests the European Community to define without delay, its attitude regarding the system to be adopted in respect of certain agricultural products, industrial cooperation and the amount of the financial aid.

The next meeting of the Joint Committee will be held in Mauritius on October 23, 1974.

chamber music in the cloister looking westward over the sea; and after night-fall they thronged for dinner served in the Hall of the Knights, the one-time scriptorium of the old abbey, usually so solitary and cold, but where now two immense open fires kept the vast room warm. This was a cultural intermezzo in the best sense of the word; and the thanks of the guests were mingled with expressions of hearty admiration. Politics, they found, might lead one anywhere—even into the fine arts. ■

Louis C.D. JOOS

The European Development Fund

Eight new finance decisions for u.a. 25.86 million ()*

Following the assent given by the E.D.F. Committee at its 89th meeting, the Commission has made eight further financing decisions from the resources of the second (**) and third E.D.F., for a total amount of u.a. 25 862 000. These relate to six projects for which non-repayable aid is provided, amounting to u.a. 15 738 000; and two projects amounting to u.a. 10 124 000 to be financed by loans on special terms.

Republic of Mali

— *Extension of water-treatment plant at Bamako*

— *Conveyance of water to the town of Mopti and*

— *Water supplies to Nara. FM 2 300 million, equivalent to about u.a. 4.14 million*

In order to cover the medium-term requirements for drinking water in urban centres, the project provides an extension in the current system at Bamako by installation of a third water-treatment unit.

For Mopti and Sévaré and the rural centre of Nara in the Sahel, where the population is still supplied by the traditional types of well, provision is made for the supply of water by conduit.

Islamic Republic Mauritania — *Extension of National Hospital at Nouakchott: UM 274 million, or about u.a. 4.93 million.*

The aim of the project is to bring the country's public health infrastructure up to the level of current requirements. The plan is to enlarge the national hospital in the capital city, and equip it with specialist services, enabling it to provide treatment for the most serious cases coming from all over the country. Part of the project is the enlargement of the nursing school by the construction of new buildings.

(*) u.a. = unit of account = c.\$US 1.20 (new parity).

(**) The commitment from the resources of the 2nd E.D.F. is u.a. 1 million.

Republic of Upper Volta — *Construction of technical High School at Ouagadougou: F-CFA 900 million, or about u.a. 3.24 million.*

This is a project to provide new buildings and supply fixed and mobile equipment for the technical High School at Ouagadougou, the site of which is close to the future university campus. The High School will provide technical training for pupils from the industrial and commercial education system.

Republic of Niger — *Supply of groundnut seed: F-CFA 777 million, equivalent to about u.a. 2.8 million.*

This is intended as a contribution to the re-starting of groundnut production in the Zinder department by supplying producers with groundnut seed for their next sowings. There is at present a shortage of seed because of the drought prevalent in this country for some time past.

Malagasy Republic — *Survey of the Ankaizina region: FMG 88 million, or about u.a. 317 000.*

This aid is to cover surveys for regional improvements in Ankaizina. It is an isolated region in the northern part of the island, possessing considerable rural development potential, with 115 000 hectares suitable for agricultural development. The aim of the survey will be to plan the use to be made of it.

Republic of Chad — *Improvement of the Moundou-Koutou road: F-CFA 175 million, or about u.a. 630 000.*

The object of this additional finance is to raise to u.a. 1,242,000 the credit committed in July 1972 for carrying out this project. The earlier provision had proved insufficient, because of considerable rises in prices, and the underestimation of the work to be carried out. The road in question provides access to the town and serves both for links with Cameroon and with the other cotton areas in Chad.

Republic of Senegal — *Development of industrial market gardening at Bud-Senegal: u.a. 4.32 million, or about F-CFA 1 200 million (loan on special terms).*

This project will establish 1,425 hectares of irrigated market garden in the Cape Verde region, which are to be in operation from 1976 onwards. Production in a normal year will amount to 30 000 tons of early vegetables for export to Europe during the winter.

Republic of Zaire — *Improvement of primary water distribution network at Kinshasa: u.a. 5.8 million, or about Z.3.5 million. (loan on special terms).*

The object is to strengthen and extend the primary water distribution network in the City of Kinshasa, so as to ensure a proper supply to the 1.6 million inhabitants. It covers construction of nearly 24 km of mains in the principal thoroughfares of the Zaire capital.

Following the finance decisions which have now been made, the total commitments from the 3rd E.D.F. amount to u.a. 709 983 000, covering 262 financing decisions since this fund began operations on January 1, 1971. (see page VI)

3rd Conference on Sea Law

The third Sea Law Conference, called in virtue of a United Nations General Assembly resolution in December 1970, met at Caracas in June until August 1974. The economic and political importance of the Conference is considerable. Its work includes a study of a new international order to be set up for the exploitation of mineral and other resources of the sea, fisheries, marine pollution, the definition of national jurisdictions and kindred matters. As the resources of the earth are gradually used up, humanity will have more and more need for the wealth of the ocean, and it is therefore highly desirable to arrive at a satisfactory system for the equitable distribution of this wealth, and for the protection of the natural environment. It is probable there will be conflicts of interest between the different groups of countries, depending on their level of technical development, which may lead the more advanced countries to press for greater liberty of exploitation, and the less advanced to seek protection for their rights for future use.

The programme of the Caracas conference is as complex as it is widespread. It seems unlikely that definite solutions acceptable to everybody can be reached straight away on all the subjects covered. It is envisaged that the Conference will hold a further session in Vienna in 1975. ■

Fairs and Exhibitions

The A.A.S.M. in tropical splendour at the Brussels Commercial Fair

The A.A.S.M. stand at the 47th Brussels Commercial Fair was a spectacular further instance of this form of direct contact with the public.

The stand, which was crowded with visitors, contained exhibits by Cameroon, the Ivory Coast, Dahomey, Central African Republic, Upper Volta, Mali, Mauritania, Niger, Rwanda and Somalia. Their tropical fruits, coffee and other food and drink products were one of the attractions of the fair and very quickly sold out. Their artistic and artisan goods, though the prices were comparatively high, were also much in demand. Apart from the actual trade promotion, information of a more general character was available at each of the national stands; and a film on the African Fortnight held in Brussels in September 1973 gave the public an indication of the holiday potential and left them with a great desire to see the various countries for themselves.

While these stands were the focus of interest in the fair itself, a meeting on the more serious aspects of eur-african cooperation was attended by members of the European and African press and diplomatic corps and leading personalities from the European Communities. This was the fourth conference organised by the eur-african press Association, under the chairmanship of its President Mr. Etienne Ugeux. He had

chosen a surprise title—"Is eur-african cooperation in doubt?" He assured his hearers that he did not think so, but issued a warning that the european public might weary of further tales of catastrophe from the Third World. Journalists should help in avoiding this reaction, he added.

One of the striking features about the contacts made in this fair is the increasingly high professional qualification of the personnel manning the stands. It seems now to be well appreciated that trade promotion requires a substantial background of knowledge and a sure instinct, on the part of the managers of exhibits, in attracting possible customers and holding their attention. In addition, the E.E.C. Commission organised, as part of its action connected with the fair, an information meeting in preparation for a training seminar next November for stand directors. The results were very encouraging.

It should also be noted that one of the meetings and discussions held on the occasion of the A.A.S.M. participation in the Brussels fair was an information meeting by COLEAMA (the liaison Committee for tropical and out-of-season fruit and vegetables from the A.A.S.M.).

International Textile and Clothing Week at Abidjan

Abidjan

The International Textile and Clothing Week held at Abidjan (Ivory Coast) from April 28 to May 4, 1974, went a long way towards attaining the objectives fixed for it by the External Trade Ministry of the Ivory Coast when it first decided to organise an exhibition of this kind.

The occasion was a meeting for 27 african firms in the Ivory Coast, Togo, Dahomey, Cameroon, Mali, Upper Volta and Senegal, and 120 european buyers and journalists who had come from France, Sweden, Denmark, the Netherlands, Great Britain, Federal Germany, Switzerland and Italy.

This was the first version on the african continent of an international textile and clothing week. It had been inspired by a multiplicity of aims, which included the following:

— On-the-spot business contacts between african producers and makers-up on the one side and european professional buyers on the other;

— Exhibition of african fashions and textile and clothing production in a number of african countries to specialist newspaper correspondents dealing with european textile and fashion matters. ■

Abidjan: Commission President Ortoli visits Africa

The trade of the Ivory Coast with the European Community trebled between 1959 and 1971, whereas the corresponding trade of other Associated countries was no more than doubled. This was stated in Abidjan by Mr. François-Xavier Ortoli, President of the



Mr. Mohamed Omar Giama, ambassador of the Democratic Republic of Somalia, speaking at the reception given by the AASM during their participation in the 47th Brussels Trade Fair 74. Mr. H. B. Krohn, EEC Director General for development and cooperation was one of his attentive listeners.

E.E.C. Commission, after his three-day visit to the Ivory Coast at the end of May, 1974.

The Ivory Coast, he continued, is an important partner of Europe, which explains why the effort made by the European Community on its behalf amounted to F-CFA 11 000 million from the 1st E.D.F. and F-CFA 15 000 million from the 2nd and 3rd E.D.F. In addition, the Ivory Coast has been the beneficiary of 40% of the loans made by the European Investment Bank.

Referring to the Community aid to countries affected by the sahel drought, Mr. Ortoli said this had been "very considerable" and he had been able to see that it was much appreciated in Upper Volta.

Referring to the new Association Convention, the Commission President recalled that it would be more extensive than that currently in force. He hoped, however, that the existing institutions would be maintained, and the provisions of the agreements now operative. ■

EUROPE AND THE THIRD WORLD: The rôle of the younger generation

The tasks which young people can fulfil to improve the cooperation between Europe and the Third World were the subject for a discussion which brought a hundred

people to Venice at the end of May. The occasion was organised by the International Youth Association, and the monthly magazine for young people, TUTTI, with the cooperation of UNICEF. The two points of discussion were eur-african cooperation and the new prospects for civil volunteer action.

Mr. Claude Cheysson, Member of the E.E.C. Commission, stressed the new relationships between Europe and the countries of the Third World, which are making it possible to get beyond the purely economic phase and reach a political dimension. From this standpoint civil volunteer work can make a new contribution to eur-african cooperation.

Among the other speakers was Mr. Pedini, who was the originator of the italian law on voluntary oversea service, which was passed in 1971 and will expire in 1976. "The law on cooperation ought to be better known and its possibilities more fully used", Mr. Pedini emphasised.

This was in fact the object of the discussion, which was intended for those concerned in universities, the officers of youth organisations and representatives of bodies concerned with cooperation with the countries of the Third World.

An account of the proceedings is to be published in a forthcoming number of TUTTI.

The discussion was specially important at a time when technical cooperation, and more especially the problems of training, are making increasing calls on cooperative personnel in the fields of teaching, vocational training and technical assistance. ■

COUNCIL OF THE EUROPEAN COMMUNITIES

Cooperation Ministers hold important meeting

The Council of the European Communities held its 292nd meeting in Luxembourg on Thursday June 13, 1974. In the Chair was Mr. Eppler, Minister for Economic Cooperation in the Federal Republic of Germany. Mr. Claude Cheysson, Member of the E.E.C. Commission took part. The chief questions discussed were the following:

1. Community aid to non-associated countries

The member countries of the European Community agreed in principle to grant financial and technical aid to developing countries not associated with the Common Market. The french delegation, however, tabled a reserve to the resolution.

This resolution specified that "the amount of this aid and the arrangements in respect of it, shall be defined subsequently". It adds that the Council of Ministers "in adopting this principle confirms its intention of giving priority to the fulfilment of financial commitments undertaken in virtue of existing associations and those in course of negotiation". This rider relates to the associated and associable countries of Africa, the Caribbean and the Pacific and the mediterranean countries of the Maghreb.

2. Community participation in the international emergency fund for certain developing countries

The Council had a full discussion on Community participation in the emergency operations specified in the action programme of the UN General Assembly for the benefit of the developing countries most affected by recent international price movements and especially oil prices.

The discussion led to substantial progress. Subject to a reserve by one country, the Ministers agreed in principle to the granting of Community aid of \$500 million to developing countries affected by the rise in the price of oil. This was proposed in the "Cheysson Plan", described in the Current News (page IV) in issue No. 25 of Association News. This aid is intended as part of a special programme of \$3 000 million specified by the United Nations, and is subject to equivalent undertakings by other industrial and oil-producing countries. No decision has yet been taken on the arrangements for the financing of this aid by the European Community, and the respective contributions from the Community budget and the bilateral undertakings of the member countries.

For this reason it was not possible to give the detailed reply on E.E.C. participation which the United Nations wished to receive before June 15. It was mainly on account of german reserves regarding the financing arrangements for this exceptional operation which prevented the Council from finalising the text of the letter to Mr. Kurt Waldheim, UN Secretary General. The fact nevertheless remains that **the Council has in principle confirmed the undertaking** given by Mr. Scheel to the United Nations.

The full text of the reply is to be formally settled by the Council, when it meets at the level of Foreign Affairs Ministers on June 25, 1974, in Luxembourg. It will then be sent in the name of the Community to the UN Secretary General.

3. List of the various forms of Community development aid

The Nine are to compile a detailed list of the various forms of aid so far given by the European Community. This is intended to enable them to consider the extent of the financial contribution they will offer to the 43 African, Caribbean and Pacific countries with which they are currently negotiating the renewal and enlargement of the Yaoundé Association, and also to the countries of the mediterranean basin. The Commission has proposed totals of between U.A. 2 500 and U.A. 3 500 million for the A.C.P. countries and between U.A. 200-250 million for the Mediterranean. These contributions would be made to cover a 5-year period.

After an initial exchange of views, the Council took note of the Commission memorandum on the different forms of Community development aid agreed in the course of negotiation, or proposed by the Commission, and the estimate of the probable cost.

The Council agreed to revert on a subsequent occasion to the problems raised in this memorandum and instructed the Committee of Permanent Representatives to prepare its work on the subject.

It should, however, be noted that the experts consider that the simple continuation of the amount of the E.D.F., adjusted to allow for the increased number of beneficiary countries and for the depreciation in the purchasing power of money, together with other factors requiring to be taken into consideration, should lead to the vesting in the fund of resources exceeding U.A. 3 000 million.

4. Food aid

At their previous meeting the Nine had agreed, in view of the world shortage, to continue the european food aid programme for a further year. The Community supplies, by way of gifts in the form of cereals, milk powder and sugar, will amount in 1975 to about \$493 million. At the request of Great Britain and Denmark, which would have preferred the Community to encourage productive investment in the countries to which this aid is given, the Nine are to hold a further discussion on the advisability of continuing such donations in kind.

The Council agreed to include in the agenda for its next meeting on cooperation and development problems, a discussion of the points relating to food aid, together with preparations for the World Food Conference and the United Nations Conference on population problems. ■

A.C.P.: The Ministers meet at Dakar

Ministers from the 44 A.C.P. countries associated or associable with the Common Market held a three-day meeting at Dakar early in June. They went through the points under discussion and settled a joint attitude to be taken in the negotiations with the European Community when they are resumed at the **ministerial level on July 25 next at Kingston (Jamaica)**. In the meantime the conclusions of the Dakar Conference have not been made public. They will be put before the african Heads of State at the O.A.U. Summit meeting at Mogadiscio and before the E.E.C. Council of Ministers by Mr. Babacar Ba, current President of the A.C.P. Council, in a mission he is shortly to undertake to Brussels.

Mr Babacar Ba said the divergences between the E.E.C. and the A.C.P. concern three main points. These are the Common Agricultural Policy; the volume of the finance aid which Europe will provide for the Associated countries; and the system to guarantee the export receipts of the A.C.P. countries in relation to which the A.C.P. are asking for an index number system to link the prices of agricultural produce with those of industrial goods.

In the conference lobbies there was a general feeling of optimism. In particular the ministers were specially interested in the decision of the E.E.C. Council of Ministers to eliminate all customs duties on agricultural products

from the A.C.P. countries which may compete with European agricultural produce, such as meat, oils and fats, fruit and vegetables and other items.

In circles close to the conference it was noted that the attitude of individual A.C.P. countries have come considerably closer together during the past year. This relates especially to the principle of reciprocity in the trade with the E.E.C. and the fixing of the amount of finance aid from Europe to the Associated countries.

The divergences between the A.C.P. countries and the European Community are now mainly concerned with the following points:

— **Price stabilisation:** The A.C.P. countries consider the E.E.C. proposal on a price guarantee system are now out of date, because of recent changes in international business conditions. They would like to see a new type of relationship setting up a close link with the prices of their produce and the goods and services coming from industrial countries. In particular, they ask for an E.E.C. guarantee for their exports on a product-by-product basis and expressed in units of volume. The E.E.C. has not yet stated its attitude about this.

— **Economic and industrial co-operation:** The A.C.P. countries hope the E.E.C. will accept the principle by which certain industries should not establish themselves elsewhere than in associated countries. The E.E.C. has not yet envisaged such a provision. The A.C.P. countries also hope to participate more actively in the management of the development aid and in adapting it to their own national development plans. They ask, too, that the administration of this aid should be more flexible and capable of adjustment to economic conditions in individual countries, and they are asking for special measures for the benefit of the less developed countries.

— **Non-tariff barriers:** The A.C.P. are asking for the elimination of some 900 non-tariff obstacles, such as fiscal duties and health regulations, which currently hinder their trade with E.E.C. countries. The answer made to this by the E.E.C. Council of Ministers is that these questions are outside its competence and within that of each individual member of the Common Market.

— **On questions of trade,** both Africans and Europeans have now abandoned the principle of reciprocity as it stood in the Yaoundé and Arusha agreements. Europe is to have the benefit of the most-favoured-nation clause, but will agree to possible derogations connected with trade relations between developing countries.

The A.C.P. countries have asked for the abandonment of the fiction of a free trade area which, in their view, amounts to nothing because of the system of generalised preferences.

As regards the diminution of preferences previously enjoyed, the A.C.P. countries would wish a detailed compensation plan to be worked out to cover the losses sustained, and supplemented by action to help in the structural transformation of their economies (production and trade promotion).

From the African side, therefore, there does not seem to remain any major problem before the resumption of negotiations between the A.C.P. countries and the Common Market.

On a number of important points the attitude of the E.E.C. is not yet known. For this reason the instructions to be given to the A.C.P. negotiators must necessarily be flexible, so that the forthcoming negotiations can be brought to a successful conclusion.

Special emphasis is laid on the urgent need for quick determination of the area of agreement, since the Yaoundé and Arusha conventions expire on February 1, 1975. ■

European Development Fund

(continued from page III)

Following the assent given by the E.D.F. Committee at its 90th meeting, the Commission has made four further financing decisions from the resources of the 3rd E.D.F., which are approved as of June 7, 1974.

1. Republic of Zaïre — Promotion of small and medium firms in Zaïre: 586 000 Zaïres, equivalent to about U.A. 972 000.

The project is aimed to support the campaign of the Zaïre government to bring into existence a middle class of Zaïre national heads of businesses. The intervention provides for setting up a technical assistance team, the material needed for handling their work and the cost of architectural planning for a building to house the headquarters of the small and medium firms' promotion office (O.P.E.Z.).

2. Republic of Upper Volta — Rural education in the Yatenga and South-Western regions: F-CFA 600 million, or about U.A. 2.16 m.

In the course of a 4-year period this finance should make it possible to

consolidate and improve the rural education system, which is designed to provide practical training for young people in these areas and help them to find their place in rural life. It covers the provision of technical assistance, the construction of rural training centres and the supply of material and equipment.

3. Republic of Senegal — Construction of the Tambacounda-Dialakoto road and the Mako bridge: F-CFA 1 680 million, or about U.A. 6.05 million.

As a remedy for the isolation of South-Eastern Senegal, it is proposed to improve and surface a first 65 km section of the Tambacounda-Kédougou trunk road, which passes through a highly developed agricultural portion of the region, and provide better access to the Niololo-Koba National Park. At the same time a bridge is to be built at Mako which will make it possible to cross the Gambia in all seasons.

4. Somali Democratic Republic — The planning survey for development of the Giuba valley: Sh. So. 3.008 million, or about U.A. 400 000.

This survey is to ascertain the economic development potential of the Giuba valley, especially for agricultural purposes. It is intended to define a further intervention programme which will include regularisation of the flow of the river, the laying out of cultivable areas and provision of the necessary infrastructure. It will also serve as a basis for the execution plans.

5. Republic of Gabon — Contribution to the building of the Owendo-Booué railway.

Following the assent given by the Committee of the European Development Fund (E.D.F.) at its 90th meeting, the Commission has made an economic infrastructure project financed by a loan on special terms of: 7 million u.a., or approximately CFAC 1 944 million.

The Gabon, which is concentrating on developing the potential of its forestry and mining resources, needs for this purpose a reliable internal transport system and a large-capacity port infrastructure.

This project, which has been given priority under the Gabonese five-year plan and to which E.D.F. is to contribute 7 million u.a., consists of constructing a 332 km stretch of standard gauge railway between the port of Owendo and Booué. At the same time work will begin on building a timber-handling port at Owendo and on a two-stage scheme for 370 km of roads serving the railway.

This railway should make it possible to increase exploitation of the vast forestry potential of the second and third forest zones, to further develop the potential of various species of wood which cannot be floated, and establish

processing industries within production areas.

In the longer term, the Government proposes to extend the railway from Bououé to Belinga so that further mining resources can be exploited, and particularly the iron ore at Belinga which is estimated at 1 000 million metric tons.

The total cost of the investment required for building this first stretch is estimated at some 170 million u.a. It will be provided by the Gabonese Government and from other sources. The E.D.F. loan on special terms is granted for 40 years, with a period of grace of ten years, at 2%.

Following the finance decisions now made, the total commitments from the 3rd E.D.F. amount to U.A. 726 570 000 covering 267 financing decisions since this Fund began operations at the beginning of 1971. ■

OIL : consequences for Africa of higher oil prices

1. *Assessment by the german review "Afrika Verein" (May 1974).*

Africa has been severely affected by the spectacular rise in oil prices, but the impact is unevenly spread, depending on the resources of each individual country. African oil-producing countries, of course, have benefited from the higher prices.

African countries which export raw materials other than oil, have had to pay more for their oil supplies, but the parallel rise in the prices of their own products has enabled them to face this and improved the total figures of their external trade. The ratio between extra expenditure on oil purchases and extra receipts from sales of other raw materials is 40:230 for Zaire, 30:170 for Zambia, 100:140 for Morocco, 50:130 for the Ivory Coast and 50:60 for Ghana. There remains a third group of 16 african countries seriously affected and almost totally impoverished, for which bilateral and unilateral aid will not offset the rise in the cost of oil.

2. *Assessment by the E.E.C. Commission.*

Replying to parliamentary questions No. 692/73 (Mr. Cousté) and No. 694/73 (Mr. Giraud) on the impact of higher oil prices on associated countries (A.A.S.M.) and the "associables", the Commission states the extra cost for the present year to the A.A.S.M. is \$280 million, without including Gabon, which is an oil exporter. For the associable countries, the extra cost is \$820 million, excluding the oil-producing countries Nigeria, Barbados, Trinidad and Tobago. Thus, for the A.C.P. countries (other than oil-producers) the total extra cost is \$1 100 million.

A full evaluation, however, of the impact of price movements for the A.C.P. must also bring into account the rise in prices for products other than oil, of which they are exporters or importers. The results would show sharp differences from country to country. For some of the Associated countries the conclusions are a matter for much anxiety; and for this reason, some of the associated and associable countries (the least wealthy) should be included among the countries eligible for benefit from the emergency fund proposed by the E.E.C.

The Commission reply was as follows:

"The Commission has made far reaching studies with a view to assessing the impact of the higher prices for oil on the economies of developing countries, and more especially the A.A.S.M. and the other countries currently in negotiation with the E.E.C.

There are difficulties in the making of such an assessment because of the need for making assumptions regarding the prices and quantities of oil imported by the countries in question in the year 1974. Subject to these reserves and assuming the average price of oil in 1974 remains at the levels decided at the Teheran conference of December 23, 1973, the increased import expenditure on oil and petroleum products alone will amount in 1974 to \$280 million for the A.A.S.M. and \$820 million for the other countries currently in negotiation with the E.E.C.

The Commission, however, invites the attention of the Hon. members of the European Parliament to the fact that the economic analysis should not be limited to the impact in the rise of oil prices alone, but should be extended also to the other rises in raw material prices imported into or exported from developing countries (more especially the african countries) and to the (highly conjectural) volume of the 1974 exports. The broadening of the analysis to cover all these factors discloses very considerable differences between one country and another". ■

CONGO-OCEAN: important meeting in Brussels

On the initiative of the government of the Peoples' Republic of the Congo, a joint meeting was held in Brussels on June 4 and 5 1974 of government representatives, development aid organisations and the Congolese authorities. It was concerned with the project for changing the course of the Congo-Ocean Railway (C.F.C.O.) over the 110 km of its passage through the MAYOMBE mountains between km 57 (HOLLE) and km 167 (DOLISIE).

The project is for a new and up-to-date section with centralised communications control. Its carrying capacity is estimated at 10 million net tons per annum, which should enable CFCO to deal with the expected growth in traffic up to 1995.

Taking part in the conference were representatives of the E.E.C. Commission (E.D.F.), the European Investment Bank, France (the Aid and Cooperation Fund, the Economic Cooperation Fund and the Central Office for Overseas Railways), Canada (International Development Agency), the World Bank group, the African Development Bank and the Bank of the Central African States.

Federal Germany, represented by Kreditanstalt, attended as an observer.

The Congolese Delegation was led by Commandant Louis Sylvain GOMA, Minister for Public Works and Transport, who acted as Chairman.

The project aroused keen interest among the participants. After it had been studied and views exchanged on possible financing arrangements, it was agreed to continue the study in such a way that the work can be carried out within the period proposed by the Congolese government.

In the name of the Congolese government, Mr. Goma thanked all the delegations for their attendance and the contributions they had made to the different phases of the study. The project conditions the economic expansion not only of the Peoples' Republic of the Congo, but also the other Central African countries dependent on communications across the Congo for bringing their imports in and taking their exports out. ■

Technical Assistance by Correspondence

The "References-Development Service" (S.R.D.) of S.I.D.

At the end of 1972 the technical assistance by correspondence, which had been given since 1965 by the "Question and Answer" department of the O.E.C.D., was transferred to the "References Development" department set up for the purpose by S.I.D. (Society for Industrial Development), except for the industrial questions which were transferred to U.N.I.D.O.

The S.R.D.-S.I.D. has its headquarters at 49, rue de la Glacière, 75013 Paris, France. It deals with requests for information and documentation on matters connected with economic and social development sent to it by public or

quasi-public organisations in developing countries. The assistance is given free of charge and the cost of running the service is borne by subsidies from the United Nations Development Programme and various public and private aid organisations (especially the German Cooperation Ministry). The correspondents of the service, who are people who give the information, make no charge for the documentation requested.

Apart from exceptional cases S.R.D. does not work as a Data Bank, but rather as a Source Bank. In respect of each question received it chooses from its world network of free correspondents those which appear best able to provide the most suitable documentation for ready use by those who sent in the question. The correspondents include the "family" of UN organisations and the World Bank, the chief inter-government regional organisations (O.E.C.D., E.E.C. and others); most of the organisations for bilateral technical assistance and their counterparts in developing countries; international private associations and institutions of a vocational or technical character; and a number of national specialist organisations, public and private, including research institutes, documentation centres and similar bodies. If necessary, too, S.R.D. may call on the 6 000 individual or institutional members of S.I.D. all over the world. ■

Agriculture

The Catholic Information Office on European Problems (O.C.I.P.E.) recently organised a discussion on the role of the E.E.C. in Third World agriculture. It was held in Brussels on June 12-14 1974.

Seven subjects were brought under discussion:

- Recent changes in the position of developing countries regarding food and agriculture;
- Impact of E.E.C. agriculture policy on developing countries;
- E.E.C. food aid;
- E.E.C. financial and technical co-operation with associated developing countries in regard to food and agriculture;
- E.E.C. agricultural commercial policy towards the associated african countries, Madagascar and Mauritius and the developing countries in the Mediterranean;
- Possible E.E.C. contribution to obtaining world commodity agreements regarding agricultural produce in the multi-lateral G.A.T.T. negotiations;

— Types of cooperation in agricultural development in the Third World which might be provided by E.E.C. and its member countries. ■

WASHINGTON - THE COMMITTEE OF TWENTY:

A Mini-reform after two year's Labour

The Committee of Twenty, after two years hard labour on the reform of the world monetary system, ended its work on June 13 with a few interim measures pending the setting up of a renewed system which is deferred till much later.

The Committee agreed on the following points:

- Provisional valuation of special drawing rights on basis of a mixed bag of currencies. The rate of interest on them is raised to 5%.
- Creation of an interim Committee of finance ministers to supervise the I.M.F. activities. It will have 180 members and should meet 3 or 4 times annually.

— Adoption of a good conduct code as guidance for central banks in the ordered operation of foreign exchange markets in this period of generalised floating currencies.

— Undertaking by countries, members of the I.M.F., to abstain from restrictive commercial practices to reduce their payments deficits.

— Assignment to the I.M.F. to study all problems connected with gold, including the possibility for the Fund itself selling metal to cover aid for the poorer countries.

All these measures will come into effect on ratification by the I.M.F. Board of Directors within the next few days.

The Committee of Twenty consists of representatives of industrial countries and developing countries. It was mainly concerned with facilitating payment by importing countries for their oil and putting a little order into the current system of generalised floating currencies and galloping inflation.

For the first time in a meeting of this type, the developing countries adopted a concerted attitude in the attempt to obtain additional advantages. The industrial countries, more particularly the United States, asked for an interval to examine this request. The poorer countries, however, maintained their ultimatum, threatening to block some of the reforms proposed by the I.M.F. if they are not given satisfaction by next February.

The industrial countries for their part had no difficulty in reaching agreement outside the Committee of Twenty on

methods for mobilising their stocks of gold at prices approximating to those of the free market in order to obtain international credits.

This measure will be of no benefit to the developing countries and they would wish the I.M.F. to sell part of its own gold stocks in the free market so as to increase the credits it is able to grant them. This proposal was disliked by some of the industrial countries, fearing a collapse in the market, and it was put back for further study.

Two measures were, however, adopted on the Thursday by the Committee of Twenty, to provide additional I.M.F. credits for developing countries and industrial countries finding it difficult to pay for their oil imports. In the first place the I.M.F. is empowered forthwith to borrow money from the oil producing countries to the extent of some \$3 500 million for the purpose of re-lending to oil consuming countries. Secondly there is shortly to be an increase in the normal I.M.F. credits made available to underdeveloped countries, and a plan for a more extended repayment period is to be introduced.

Finally a new committee is to make an urgent examination, over the heads of the World Bank and the I.M.F., of additional measures which might be taken to secure an increased transfer of resources to the underdeveloped countries most affected by the rise in oil prices and world inflation. ■

O.A.U.

ETEKI appointed

Mr. William Eteki Mboumoua, 41, has been appointed administrative secretary general of the Organisation of African Unity. He was chairman of the UNESCO general conference at Paris from 1968-70.

Mr. Eteki Mboumoua, who is French-speaking, succeeds his Cameroon compatriot Mr. Nzo Ekangaki, who is English-speaking.

From 1971 Mr. Eteki was special counsellor to Cameroon president Ahmadou Ahidjo on the O.A.U. Middle East committee. He was minister of education, youth and culture for several years after returning to Cameroon shortly before the country became independent in 1960.

Mr. Eteki was born in Douala, the economic centre of Cameroon, studied law and political science in Paris and became a civil administrator at the Ecole nationale de la France d'outre-mer (national overseas french school).

His publications include "A certain humanism" and "Democratising culture".

Table 3
East Africa

Countries	Switching stations	Number of circuits or lines	Amount in FF millions	Long-distance links	Type	Amount in FF millions	Remarks
Botswana				Francistown – (Zambia) Francistown – Gaborones	MWL (1) MWL	6.85 10.52	
Ethiopia				Asmara – (Sudan) Harrar – (Somalia) Shashamane – (Kenya)	MWL MWL MWL	11.99 3.25 16.70	
Kenya				Nairobi – (Ethiopia) Mombasa – Malindi Malindi – (Somalia)	MWL MWL Rh (2)	15.88 5.91 8.57	In process of being financed
Somalia	Mogadiscio CT3 and CTN	1 598	5.68	Hargeisa – (Ethiopia) Chesimaio – (Kenya)	MWL MWL	2.18 2.58 8.50	24 channels 120 channels
Sudan	Khartoum CT3 and CTN	1 290	9.50	Khartoum – Atbara Atbara – (Egypt) Atbara – Port Soudan Senar – (Ethiopia)	MWL MWL MWL MWL	8.53 15.75 12.33 13.57	money being allocated money being allocated
Tanzania				Dar-es-Salam – (Zambia)	MWL	18.04	
Zambia				Kapiri – Lusaka – (Tanzania) Livingstone – (Botswana)	MWL MWL	20.68 0.92	

(1) MWL Micro-wave link – line of sight.
(2) Rh Micro-wave link – radio-horizon.

The number of telephones (including party lines, extensions etc.) has increased by a factor of 2.2 over ten years.

There are plans for:

- a new exchange plus a new building in N'Djamena (2 800 lines) at an estimated cost of FF 11 000 000.
- a small (24-channel) micro-wave link between N'Djamena and Abécher.

RWANDA: The total number of telephones (including party lines, extensions etc.), which stood at 2 366 at the end of 1972, has risen by a factor of 3.4 over ten years. There were 1 657 telephone lines and 20 telex terminals.

ZAIRE: At the end of 1972 there were 24 166 lines, of which 18 254 were automatic. The percentage (76%) of automatic lines means either that automatization has been slower in coming to large towns or that rural areas are being served better than in other countries. Total number of telephones (including party lines, extensions etc.) was 42 127, i.e. 1.75 times the number of lines. There were 456 telex terminals.

The infrastructure in Zaïre consists of two micro-wave links between Kinshasa and Matadi and between Kinshasa, Kananga and Lubumbashi. Work for which studies were carried out in 1972 on further micro-wave links between Kananga, Kindu and Kisangani and between Kindu, Bukavu and Bunia will start in the near future.

Zaïre has a plan (estimated at FF 151 000 000) for television broadcasting using a network of 13 ground stations with aerials beamed on the satellite Intelsat IV, position Indian Ocean. In the future this network will probably be used to complete the country's telephone system.

East Africa

This area consists of: Botswana, Ethiopia, Kenya, Malawi, Somalia, Sudan, Tanzania and Zambia. None of these countries are linked to the E.E.C. by the Yaoundé Convention and therefore only the PANAFTTEL network will be described.

However, Madagascar has been included in this area and the national facilities of this country will be examined.

I.T.U. plans for Africa show that, as laid down in the routing plan, this area will be served by the CT2's in Nairobi (in service) and in Addis Ababa. CT3's are planned for each country in Dar-es-Salaam and Zanzibar (Tanzania), Kampala (Uganda), Lusaka (Zambia), Khartoum (the Sudan) and Mogadiscio (Somalia).

The following ground stations are in service: Nairobi (Kenya) with an aerial beamed on Intelsat III, position Indian Ocean; Tananarive (Madagascar), with an aerial beamed on Intelsat IV; position Atlantic, and Saint-Denis (Réunion). A ground station is planned in Lusaka (Zambia), to be beamed on Intelsat III, position Indian Ocean.

Links planned under the PANAFTTEL network for this area are given in table 3.

Madagascar is the only country from this area whose national facilities have been examined.

In 1972 there were 13 624 lines, of which 9 472 (70%) were automatic, a total of 28 973 telephones (including party lines, extensions etc.), giving 0.002 telephones per head of the population, which means an increase of the order of 100% over ten years. There were 141 telex lines at the end of 1972.

The existing infrastructure is made up of an east-west link between Tananarive and Tamatave, consisting of a coaxial cable and a micro-wave link which is under construction; a north-south micro-wave link between Tananarive and Fianarantsoa; a micro-wave link under construction along the coast between Tamatave and Diego Suarez. Outside Tananarive and Tamatave, the automatic network consists of about ten exchanges (21 600 lines either connected or being connected).

Work planned for the near future includes a coaxial cable between Tananarive and Majunga (estimated at FF 22 000 000), modernization and extension of the long-distance link between Tananarive and Fianarantsoa (FF 14 000 000) and increasing facilities in the switching stations.

Ws have given a brief outline of work planned for the coming years and attempted to analyse the factors affecting the way in which telecommunications are likely to develop in this area.

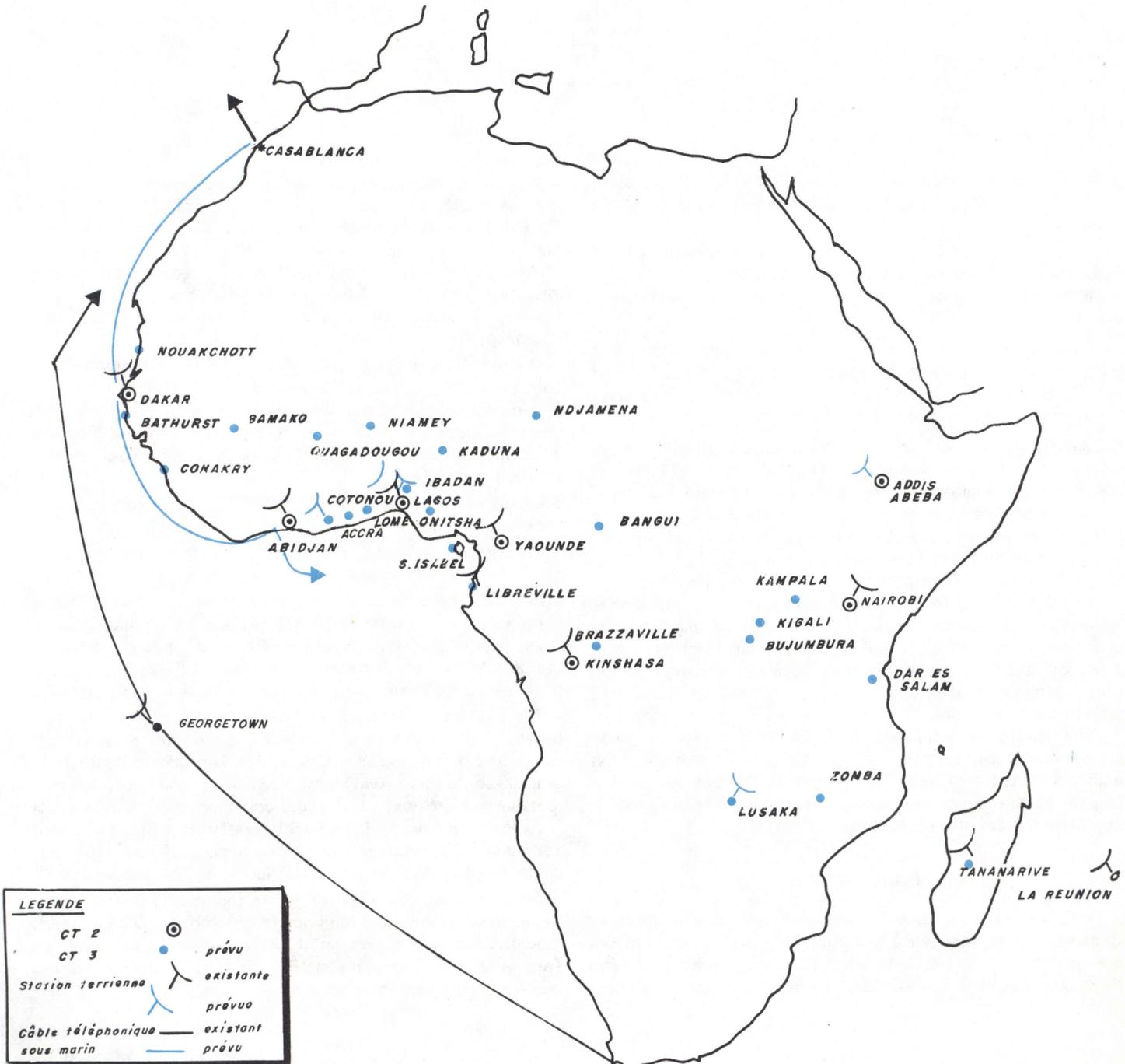
Some general remarks would be useful and provide a suitable conclusion.

The infrastructure resulting from the PANAFTEL network and work carried out in the various States can be fully effective only if these complex installations are properly maintained, and the countries concerned must thus train specialized maintenance staff and encourage them to stay in their jobs after training. The fact that there are often more than twice as many telephones (including party lines, extensions etc.) as lines means that the traffic on these lines is often greater than anticipated and that the switching network could become

overloaded. When calculating the capacity of an exchange and the number of circuits, account should be taken of the increase in traffic which will result from the inevitable fall in the cost of calls in the coming years after a proper system of charges has been introduced.

Additional work planned in connection with the PANAFTEL network can only be carried out with the aid of financing organizations; this is particularly the case for long-distance links which, although initially unprofitable, will form a vital part of the African network. It is to the credit of the I.T.U. and its General Secretary that they realized this, and have worked to establish a network which will satisfy the needs of the African economy and contribute towards its development. ■

T. NOAT



E.D.F. support for african telecommunications

by Pierre LEQUEUX

Communications in general, and telecommunications in particular, respond to a fundamental instinct of mankind. The need for them is increased, if not actually created, by the fact that nowadays our commercial, political and cultural exchanges cover the remotest corners of the globe. When we talk of national or regional telecommunications, we are using restrictive terminology. Telecommunications are a matter for the whole world.

The development in telecommunications over the past half century has been breathtaking. There is scarcely a person alive today who does not possess, or want to possess, his own radio set. From the city tycoon to the desert nomad, everybody aspires to knowledge of events in the outside world. At present there are five telephones in the world for every 100 inhabitants, but unfortunately they are unequally distributed. In 1970 the world had 225 m. telephones, but 91 % of these were in the developed countries, which accounted for no more than 39 % of the number of people. These figures are only relative, because the telephone follows the need for it; but they are another instance of the unequal distribution of the world's prosperity.

Telecommunications are the nerve system of present-day society, and without them there would be total paralysis. The important thing about them is their speed, and it is this which makes them indispensable. Whether by cable or by wireless, these messages travel at 300 000 km per second, and there is no system of air or surface transport which can compete. In future the number of distance communications is bound to increase, economising in the movement of people. In the last resort it is no mere fantasy to look forward to the days of the fireside computer, so that everybody will be able to do their work at home.

The next few years will see experiments in new systems which, in the 21st century, will be ushering in what may be called the age of telecommunications. In this period the dialogue between man and machine will mark fresh advances, and this is what makes it so important to promote the development of telecommunications in all countries. It is unthinkable that a modern nation could aspire to life of a high economic and social standard without the centres of its activity being linked with the outside world by its telecommunications system.

A growing number of countries engaged in the race for progress are now facing problems of telecommunications development. These are the more important for the fact that demand is constantly growing, and the technological systems are fast developing. As the extension of communications around the world becomes increasingly complex, the indispensable investments will be very great. Developing countries thus have an additional interest in setting up and modernising their telecommunications systems, for the appointment of local staff with adequate qualifications to operate the system

is not something which can be arranged overnight. Sufficient schooling and practical experience over a number of years are what is needed if these countries are to get full advantage from the very advanced technology brought into use.

In the limited framework of the operations of the European Development Fund, telecommunications have an important place. The development of these systems in the A.A.S.M. is part of a large-scale scheme which involves:

- providing these countries with resources to deal effectively and cooperatively with national, regional and international affairs, whether they be political, economic, social or cultural;
- stimulating the rational operation of productive enterprise and the marketing of its product, by making it possible for information to circulate;
- bringing into every home the "umbilical cord" which will make those who live there part of the outside world and its events, and bring to them an audiovisual education, the merits of which are no longer in doubt;
- supplementing the road, waterway and air connections which, in most cases, are inadequate;
- bringing in the indispensable technological help for training the skilled workers these countries so badly need.

The E.D.F. has so far financed three telecommunications projects concerning the Ivory coast, the Congo, Gabon and Somalia. They have provided telegraph and telephone connection by cable, hertzian wave or short-wave for 27 centres of activity, covering a total of 2 227 km of development. There is provision for various connections which will enable information to be sent and received by television. The economic and social value of such projects is plain, and they go far outside the narrow limits of individual national territories. They make for better regional and international connections, and are important segments of the future pan-african telecommunications system which is aimed to provide direct international connections between 37 african countries.

Examples of Community intervention

IVORY COAST: hertzian wave connection ABIDJAN—MAN

Before the intervention of the E.D.F. in Ivory Coast telecommunications, the available system consisted of:

- urban telephone system at Abidjan, only slightly used, but ready for a comparatively large development (7 250 subscribers at the end of 1961);
- the embryo of an internal network of very poor quality (1 620 subscribers).

In 1955-61 there was a rapid expansion in most sectors of the Ivory Coast economy, and the government accordingly

decided to put forward a national inter-urban telecommunications plan with the following specifications:

- inter-connection of all urban areas of sufficient economic importance;
- facilities for a general service of proper quality;
- provision for operation adapted to the existing volume of traffic and permitting subsequent extensions which could easily be carried out.

On this basis the Ivory Coast inter-urban system was designed in two branches in the form of a V, with Abidjan as the central point. The two branches are:

- south-north axis: Abidjan-Agboville-Abengourou; and
- south-north-west axis: Abidjan-Man with connection to Bouaké.

In 1962 finance of F-CFA 600 m. was arranged from the resources of the 1st E.D.F. This was for the second of the above sections, from Abidjan to Man and not including the Bouaké connection. It covers the provision of telegraph and telephone connections by hertzian wave of high capacity, and the construction and equipment of four transmitting-receiving stations. It came into operation on August 6, 1969, is 530 km in length and links the towns of Abidjan, Gagnoa, Daloa and Man.

There is a capacity of 240 telephone circuits, which can be raised to 600. It follows the route:

Abidjan (Abobo station) – Binao – Digo – Bouaké – Seizra – Daloa: 324 km by direct visibility; Digo – Gagnoa: 60 km by direct visibility; Daloa – Man (Mount Tonkoui): 146 km by tropospheric diffraction. (Between Abidjan and Bouaké it uses the basic infrastructure of the Ivory Coast television system.)

The terminal stations at Abidjan and Man are destined to play an important part in the hertzian system in the Ivory Coast, and in the television system. The Abidjan (Abobo) station is on a plateau 10 km from the town, and is to be the line-head for the long-distance hertzian system for regional and international connections. The station at Man, on Mount Tonkoui, 12 km from the town, has it in direct visibility and its altitude of 1200 m. will enable it to serve as a clearing station for the connections in this region.

Passive reflectors installed on very high pylons and the principle of long gaps (e.g. 107 km between Binao and Digo) have made it possible to diminish the number of points requiring supervision. The independent relay stations are entirely automatic and their power supply is by generating groups. The very elaborate tele-supervision and the high-capacity service line



TV in Upper-Volta

Technical design

In the present stage of telecommunications technique, and for regions with a low population density, viable and comparatively cheap connections over distances of around 500 km can only be secured by direct or trans-horizon hertzian wave. With intermediate relay stations they allow the transmission of VHF radio-electric signals carrying telephone and telegraph messages, and even television, over distances of 50 to 80 km (direct visibility) and by tropospheric diffusion beyond the horizon for distances of 100 to 300 km. The costs of the two systems are much the same, but the direct view system carries a greater number of transmissions of better quality. It is also easier to maintain.

The project as adopted comprises a mixed hertzian system (trans-horizon and direct visibility). This has made it possible to integrate part of the connection into the Ivory Coast television system; to instal equipment of high-capacity, which can be extended without modification of, or additions to, the material; and to adopt transistorised equipment.

make it unnecessary to employ permanent personnel in the relay stations. The high degree of serviceability is guaranteed by varied-frequency operation, with commutation of the type 1+1.

CONGO - GABON : Transhorizon hertzian connection

Already in 1960 the problem of inter-urban and inter-regional telephone and telegraph connections was beginning to be a matter of serious concern to those in charge of the Brazzaville office of what was then the Equatorial Office of Post and Telecommunications.

A number of important mining and industrial projects had been put in hand, including oil and manganese ore in Gabon, potash, sugar and cement in the Congo. The economies of the two countries were expanding rapidly, and this was leading to a continued growth in trade and the setting up and extension of a number of urban centres.

There was thus a quick and spectacular increase in the need for rapid communications, and the Office had to deal with this in the first instance by a considerable increase in the urban and inter-urban communications. Moreover, there was continued interpenetration between the two national economies; and Brazzaville was the only centre for international communications. The Office had therefore the task of setting up better regional connections between the Congo and Gabon.

In practice the radio-electric material then in service could no longer deal with the growing volume of communications required in normal conditions. The position was specially critical between Brazzaville, the Congo capital, and the Port of Pointe Noire, for there had been a spectacular increase in the tonnages of manganese ore sent down from Franceville and this had brought with it a rapid growth in the need for quick communications. Between Libreville and Port-Gentil in Gabon the situation was little better, for the expansion of the timber processing industries and the production from the oil wells had very quickly saturated the telephone and telegraph facilities. This was the background to the Commission's agreement at the end of 1962 to a joint application made by the governments of the two countries covering the installation

Various adjustments had to be made in the project while it was still in the course of execution, in order to allow for these new circumstances. The adjustments approved by the Commission in July 1968 were mainly as follows:

- reduction of the capacity of the connection between Mouila in Gabon and Dolisie in the Congo from 120 to 24 circuits;
- elimination of the 24-circuit connection planned between Moanda in Gabon and Dolisie in the Congo;
- re-routing through Port-Gentil of the 120-circuit connection initially provided to connect Libreville with Lambaréné;
- replacement of the hertzian system between Dolisie and Brazzaville by a coaxial cable of high-capacity (120 circuits in each direction +12 omnibus circuits) facilitating service for intermediate localities.

The work on this project is now finished within the limit of the F-CFA 840 m. provision made for it.

Subsequently, from the funds available in the 3rd E.D.F., a special loan of U.A. 756 000 was made to the Republic of Gabon for the branch connection Mouila-Moanda-Franceville, connected from the Libreville-Dolisie line. This project had been made necessary by the growing demand arising through mining operations in the region. It also uses the hertzian



of telecommunications using the hertzian system to improve the regional and inter-State connections.

The financial commitment from the resources of the 1st E.D.F. was for F-CFA 840 m., or about U.A. 3.4 million.

The project financed was for a telecommunications link between the two countries, in the form of a transhorizon hertzian system connecting the stations at Brazzaville and Dolisie in the Congo with those at Moanda, Mouila, Lambaréné and Libreville in Gabon.

The objective was two-fold: connection of both the Congo and Gabon systems with Brazzaville, through which all the international traffic of the two countries came; and inter-connection between the big towns of the Congo-Gabon area.

Subsequent economic and political developments have led to the setting up of an international station at Libreville and the replacement of the Equatorial Office by national offices. In some degree this has reduced the need for connections between the two countries, but it has made it desirable to further develop the national systems.

system, and transmits telephone and telegraphic communications over a total distance of 290 km.

The new installations as a whole are maintained in the usual way, and are still operating satisfactorily. Already, however, there is near saturation on the Libreville-Port Gentil line, where the 60 circuits (24 telephone and 36 telex) are shortly to be raised to 120.

Technical design

In Gabon the telecommunications connections comprise:

- a hertzian tropospheric system between Libreville and Port-Gentil (150 km) with a capacity for 120 circuits equipped in the first instance for 36 circuits;
- a hertzian tropospheric system Lambaréné-Mouila-Congo (Dolisie) (475 km) with a capacity of 24 circuits, equipped initially for 12 circuits;

- a trans-horizon connection Mouila-Moanda (250 km) with a 24-circuit capacity, equipped for 6 telephone and 4 telegraph circuits;
- a direct view connection between Moanda and Franceville (40 km) with a 24-circuit capacity, equipped for 6 telephone and 3 telegraph circuits;
- infrastructure for the stations at Libreville, Port-Gentil-Lambaréné-Mouila-Moanda and Franceville.

Between Port-Gentil and Lambaréné the continuity of the telephone circuits is ensured by a hertzian system, and multiplex equipment has been installed by the Gabon administration.

In the Congo the installations financed by E.D.F. were a hertzian station at Dolisie to provide the connection (capacity of 24 circuits, 1st stage 12 circuits) with Gabon, and a connection between Loutété and Brazzaville with a capacity of 120 circuits in each direction and 12 omnibus circuits. This consists of:

- a coaxial cable some 192 km in length;
- terminal line equipment and intermediate repeaters;
- multiplex equipment to provide six telephone circuits between Brazzaville and Matoumbou to serve the Kinkala sector;
- 12 telephone circuits between Brazzaville and Loutété;
- 6 telephone circuits between Brazzaville and Mindouli;
- 24 telephone circuits between Brazzaville and Dolisie, of which 6 are for Libreville;
- 36 telephone circuits between Brazzaville and Point-Noire;
- 7 telephone circuits from the additional omnibus group of the system to provide for point-to-point connections;
- 8 telegraph circuits, of which two are to serve Loutété and 6 are to Dolisie.

SOMALIA :

Internal and international telecommunications systems

For Associated countries covering a very wide area, communications in general, and telecommunications in particular, raise acute problems. In Somalia these are enhanced by the fact that the chief areas of economic activity are comparatively far apart, partly for topographical reasons, partly because of localisation around the principal natural resources.

It can thus be seen that the communications problem is specially important for the general development of Somalia.

Very little had been done about the telecommunications since the country became independent. The only important intervention was that of the World Bank, which had financed an automatic telephone exchange of 2 000 lines at Mogadiscio. This cost about \$ 3 m. and was completed in 1965.

All the telephone and telegraph equipment, apart from the exchange in question, was old and supersaturated. The Somalie authorities therefore regarded the solution of this problem as a matter of special urgency. This led, in November 1969, to a first financing of 23 393 000 Sh. So (1) by the European Development Fund, and a second financing of 17 857 000 Sh. So from the same source in July 1972.

(1) Sh. So (the Somalie shilling) = U.A. 0.13.

The projected telecommunications system is to provide links between the north-western and north-eastern parts of the country around the town of Hargheisa, the central region angled on the capital city of Mogadiscio and the Kisimayu region in the south. It is designed to remedy the social isolation of some of the most important regions in the country (Merca, Giamama, Hargheisa) and it will ease the task of the administration.

The new connections should also help the trading position. There are material differences between the northern regions (mainly concerned with cattle-raising and trading with Red Sea countries) and the southern (mostly engaged in agriculture for export and the processing industry).

The connection between Kisimayu and Mogadiscio provided for in the project, is an integral part of the future pan-african telecommunications system.

The advantages expected from the project are both economic and social, and are of concern to the whole development programme of the country. It will make normal communications possible and thus remedy the isolation or remoteness of the various districts and facilitate the rational development of the resources of the regions concerned.

Technical design

The project has been seen from the first as consisting of three operations. These are:

1. Extension of the urban telephone systems and building of new exchanges at Hargheisa and Kisimayu;
2. System of internal telecommunications by hertzian wave, from Mogadiscio to Kisimayu (south system) and to Hargheisa (northern system), with branch connections to less important centres;
3. Short-wave radio transmitting and receiving station at Mogadiscio for international traffic.

On the budgetary side part of the programme was adjusted when the contracts were placed. The northern system, using hertzian wave, was replaced by shortwave connections between Mogadiscio and the chief centres already envisaged.

The telephone systems and exchanges at Hargheisa and Kisimayu comprise:

- at Hargheisa - an automatic town telephone exchange for 1000 lines, with possible extension to 5000 lines; an inter-urban manual telephone exchange for 10 lines; and a system of subterranean cables for 2000 subscribers lines;
- at Kisimayu - an automatic town telephone exchange for 200 lines, with possible extension to 1000 lines; an inter-urban manual exchange for 7 lines; and a cable system for 400 subscribers' lines.

The internal telecommunications system is subdivided as follows:

- Northern group (northern part of the system): 6 HF radio connections between Mogadiscio (stations R1 and R2) and the towns of Hargheisa (2 telephone circuits and 2 telegraph circuits) Baidoa (1 telephone or telegraph circuit) Belet Uen (1 telephone circuit), Galcaio (1 telephone or telegraph circuit), Burao (1 telephone circuit) and Bosaso (1 telephone circuit);

— Southern group (southern part of the system): 5 hertzian connections on the route Mogadiscio – Genale – Coriolei – Gelib – Giamama – Kisimayu and 4 branch connections to Afgoi, Merca, Balad and Giohar, making a total development of 576 km.

The Coriolei-Gelib section (242 km) is equipped for tropospheric diffraction in quadruple diversity in the 900 MHz bands and provided with 10 channels, with possible extension to 120 channels.

The other sections are dealt with by direct visibility in the 7 GHz band, with a maximum of 300 channels, subdivided as follows: Kisimayu (6 channels), Giamama (3 channels), Gelib (3 channels), Coriolei (2 channels), Genale (2 channels), Afgoi (3 channels) Merca (6 channels), Balad (2 channels) and Giohar (4 channels).

All these connections, which operate in modulated frequency, transmit both telephonic and telegraphic signals. Their centralisation is in the R1 and R2 stations.

The inter-urban system as a whole is designed so as to group the hertzian and HF connections in R1, which is thus the point of convergence for the four directions Kisimayu – R1, Giohar – R1, Afgoi – R1 and Mogadiscio (Bur Hammar) – R1. In this way the corresponding circuit groups can be directed into Mogadiscio, where the central telecommunications bureau is located. Because the capital city is rather badly situated topographically, the transmission stations R1 and R2 have been built on high ground about 25 km from the centre.

In the same way the whole of the multiplex system, apart from a few local circuits, has been carried out in a centralised network design, with Mogadiscio as the central point.

Mogadiscio HF radio station for international traffic

The international telephone and telegraph system is made up of three parts. These are: the HF transmitting station R2, the HF receiving station R1 and the Mogadiscio central telecommunications bureau.

The transmitting station R1 comprises four transmitters, which can process two channels in the 250-6000 Hz band. These are as follows:

— a 10 kW transmitter for the connections with Rome;

— two transmitters of 5 kW and 1 kW respectively for the connections with Nairobi;

— a transmitter of 5 kW for the connections with Aden.

There are in all 8 telephone, telegraph and telex circuits, and the signals for transmission come from the 30-couple cable linking the transmitting station with the hertzian relay station on the same site. The five rhombic antennae are of the simple or double pavilion type. A transmitter-aerial commutation system makes it possible to connect each transmitter with any of the rhombic antennae, according to service requirements. The electrical power is supplied by three diesel generating groups of 120 kVA.

The R2 receiving station is equipped with:

— 3 radio-telegraph receivers operating on 10 pre-accorded frequencies;

— 2 independent lateral band receivers, with automatic frequency control, which can be tuned to 10 pre-selected frequencies;

— 2 simple receivers for A1 and A3 reception, tuneable to 10 pre-selected frequencies.

The control post consists of a commutation cabinet and a morse converter with telex print-off. The 6 rhombic reception antennae are similar in type to those used for the transmission. The link with the hertzian relay on the R2 site is by a 30-couple cable. The three generating groups feeding the station are of 55 kVA each.

Each of the stations described above has an automatic service telephone exchange with 14 internal lines and 2 inter-urban junctions.

The central telecommunications bureau at Mogadiscio is the focal point for the whole telegraph and telephone service, national and international. It also contains the principal telephone post for Mogadiscio for national and international telegraph and telephone communications and the telex exchange.

For these purposes the following circuits are installed:

— 8 circuits for international and telegraph traffic;

— 43 circuits for national, inter-urban telephone traffic with possible extension to 96 circuits;

— 11 circuits for national telegraph traffic with possible extension to 24 circuits.

The above equipment is divided into six sections as follows:

— telephone section, comprising the international telephone traffic room, the radio-telephone installations room and the programmes room (press service);

— telegraphic section, comprising the international and national telegraph room and the radio-telegraphic installations room;

— telex section, comprising the telex traffic room and the telex exchange;

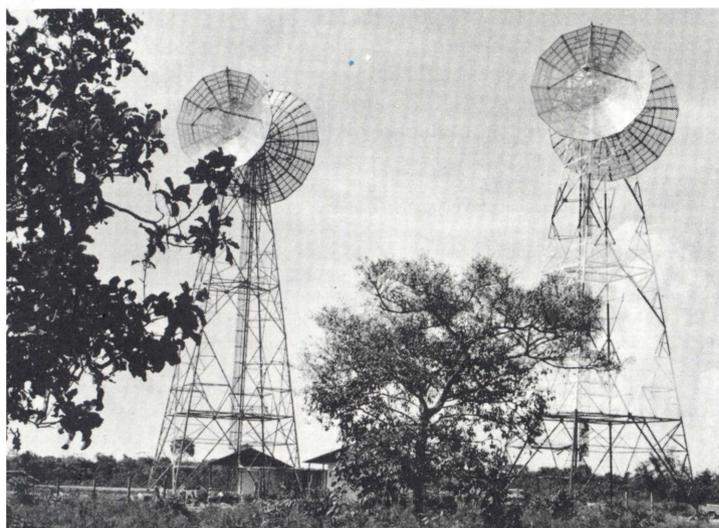
— reception section for the public;

— auxiliary service section;

— electric supply section from the city network, but equipped with an emergency generating unit of 50 kVA. ■

P. LEQUEUX

Tropospheric hertzian aerials in Zaire: modern technology in the heart of the forest.



Thomson - CSF.

Aesop the African

A tele-education project for Africa south of the Sahara

by S. SEBASONI-MANZI*

Communication and development

If we think of telecommunication from first principles, we quickly see its ability to shrink distance until the broad horizons of our planet are reduced to the dimensions of a village. We are coming back to what used to be called "tribal communication", and the question which arises is how we can best take advantage of this to deal with the basic problems with which we are faced. Outstanding among these is the problem of getting humanity into balance, so that each and every person can develop his real potentialities. If it be true that the human race is facing dangers difficult to avoid, the cause might lie in the fact that it uses the talents of only a few, and leaves the rest to fall into a pattern of uniformity.

It is easy to understand why the developing countries, in their aspiration towards equality of status in creating the world of tomorrow, and their impatience with their slow progress towards the target, have been thinking in terms of modern means of communication as a way of spreading the spirit of renewal through their territories.

Meantime the industrial countries are at hand with brand-new devices, such as the satellite, through which communications can reach the furthest corner of the earth. Such apparatus is large and complex; and it must reach large numbers of people if its cost is to be offset.

These considerations led EUROSPACE, a european industrial group for space studies, to consult the countries of Black Africa south of the Sahara on a project for using space technology to solve the problem of teaching and general education. From this emerged the project known to-day as Aesop.

The origins of Aesop

Aesop was born from international progress and research. Projects were everywhere, and only one or two need be mentioned in telling this story.

The first was known as Socrates (since it was a french national project, it used the french spelling SOCRATE). It was a scheme for a satellite to cover 17 French-speaking countries in Black Africa and had been gestating since 1968 under the sponsorship of the National Centre for Space Study (C.N.E.S.) and the french radio and television organisation (O.R.T.F.) (1). At that time the project went into cold storage, but it was never abandoned, and in October 1973 a supposedly improved version was put forward at the Addis Ababa seminar.

(*) Rwandan sociologist, director of the first Aesop study project in 1972 for Eurospace (Paris).

(1) See C.N.E.S.

— Projet Socrate — 1971.

— Les Satellites d'Education — International discussion — Nice, May 1971 — pp. 259-310.

— Contributions by M. Manuali and C. Derieux to the Addis-Ababa seminar — October 1973.

This had been organised by UNO and UNESCO to discuss "systems of broadcasting by satellite as an instrument of education and development" in Africa south of the Sahara.

Since 1969 UNESCO had been investigating the possibility of a regional system of tele-education in South America. Since 1970, too, it had been engaged on a study for a satellite to be used for educational, cultural and information purposes on a regional basis in the arab countries. For Black Africa it had carried out two studies and the Addis Ababa seminar was the natural extension of these (2).

These are only examples of the many projects canvassed, and these notes can give only a rough indication of their content. They are, however, evidence of the interest taken in tele-education. Project Aesop, therefore, did not grow out of nothing, and there is indeed a danger that the crowd of projects could elbow it out. The sponsors of Aesop were aware of this from the first, and accordingly made it their aim to bring forward a project which should not merely be one of many, but should embody qualities of originality and novelty.

What Aesop is

1. The integration hypothesis

Aesop began with great ambitions. The first studies were carried out on behalf of the European Communities and covered 30 countries in Black Africa (3).

Two considerations lay behind this. In the first place, the equipment, whether it included satellites or not, would cost a great deal of money and needed the biggest possible public to make it economic. Secondly, there were obvious advantages in having a definite project as a starting point for inter-african cooperation.

At no point, however, did the project lose sight of the political aspects. Any decision to integrate national systems into a concerted scheme of education for development belongs essentially to political leaders.

2. Systems to choose from

The same care for african political prerogatives led to the scheme not being restricted to the satellite system. Instead five different systems were described, showing their advantages and disadvantages, so that the african governments could base their choice on full knowledge of the facts and not be con-

(2) See UNESCO

— A direct broadcast satellite for education and development in Africa? Standford — 1972.

— Pays d'Afrique au Sud du Sahara — preliminary study for a regional satellite system for education, culture and development — 1972-73.

— Pamphlets in the "Notes and Documents" series.

(3) For obvious reasons the scheme did not include the portuguese african provinces, Rhodesia, South Africa and the territories in its orbit. If necessary it would not be difficult to enlarge its scope.

fronted with a take-it-or-leave-it offer. The second Aesop study compares the five systems from the standpoints of their operation, their cost, their performance and their social and economic impact. A brief summary of the five is given below. There are two systems of broadcasting—by satellite and by the provision of recordings. In both cases the programme goes direct to the user. There are three systems of distribution—by satellite, by land-based station using hertzian waves and by recordings. In all three cases distribution is associated with broadcasting by land-based television transmitters. The study also analyses the hybrid systems in which more than one of these techniques are used (4).

The decision as to the best way of securing the general objective must take account of the limitation imposed by local conditions and the constraints of the individual systems. In cases in which the available description of the system is not detailed enough to facilitate decision, it can be amplified in some degree with individual information.

Among the parameters considered is the degree of irreversibility between the systems (e.g. can system A be abandoned and what would this cost?) and their linear compatibility (e.g. can system B be used for extensions of system A?). So it is possible to know at every stage whether and how far decisions can be amended or a stop put to the expenditure.

Project Aesop thus goes a long way towards providing an honest description of the systems, including the flexibility of choice, and towards avoiding forced decisions in the future.

(4) Eurospace — E.E.C. document of 1973 on the possibility of covering certain education requirements in the countries of Black Africa by audio-visual means. Part 2; parametric comparison of audio-visual systems which could be used.



NASA space telecommunication centre in Madagascar

3. Priority for rural areas

Project Aesop is primarily directed towards education in african rural areas. It starts from the assumption that if it is to be understood by rural populations it must talk to them in their own languages. In addition, it gives priority to imparting the knowledge and skills needed for dealing with the immediate environment by the more enlightened practise of traditional occupation (e.g. agriculture, stockraising and fisheries). Preference was deliberately given to the needs and resources of the african milieu rather than to imports.

On the other hand, and this is most important, there is no attempt to bind 80% of the continent to the soil, nor to make out that Black Africa is by nature agricultural, putting commerce and industrialisation into a back seat. This is just the opposite of the truth.

The reasons why Aesop takes the rural population as its target is partly because it comprises by far the greater part of the population concerned, and partly because a rural population which has become master of its environment will provide a much broader and more consistent basis for trade, industry and the other sectors of activity.

Moreover, development in rural areas will be an important factor in making industry and the towns less artificially attractive than they seem at present. If the choice is really an open one, the appeal of industrial life will be to chose with a more definite disposition towards it; and rural life, if it can be made attractive, may perhaps prevent the townward drift which, as things stand, is less a movement to the towns than a flight from the countryside.

At present there are far too few education specialists, and a system of rural education based on rural activities would help to create interesting courses and get rid of some of the padding in the ordinary curriculum. It might help to eliminate, or at least to reduce, the wastage in the ordinary education system, aggravated as it is by the fact that entrants are not only those who have the qualities of success, but also those who go into it because there is nowhere else to go.

The choice of a rural system called for initial preparatory studies on the Aesop project. The first of these set out to define "zones of Africa with homogeneous agricultural educational requirements".

The study begins with an account of the natural constraints (geography), analysis of the sources available (economic) and a description of the existing education. A number of the chosen criteria (african languages, cultural systems, rural production and population density) are then examined and grouped, producing a combination which shows the homogeneous areas without distinction of frontier. A zone thus defined speaks or understands a specific african language, belongs to a given cultural system, has a specific type of agricultural production and a specific range of population density.

The definition of a homogeneous zone stretching across national frontiers means that we have the necessary conditions for transmitting the same message. It does not in any way pre-judge the question of whether action on these lines is desirable. Research covers the full range of possibilities and it is politics which must pare them down to what is opportune.

Aesop the African

Project Aesop is designed to be African at every stage—design, creation and every-day management. Its sponsors, Europeans and Africans alike—regard technical assistance as no more than a temporary support.

From the outset the minimum experimental work will be handled nationally, while the feasibility of the system is determined. It includes setting up, in the african countries interested, a creative centre where the content of education will be translated into pictures, and a centre of initiation in the techniques needed for the functioning and maintenance of the system. Africans will be quickly trained in the right techniques for assessing comprehension of the messages. As sociologists, it will be their job to appreciate the cultural pertinence of the messages, the cultural mechanisms which make them easy or difficult to understand and their transposition into action channelled towards novelty. It is for the educational psychologists to ascertain and lay down the machinery and speed of apprenticeship. It is for the engineers to master the whole range of the systems from the simplest to the most complicated.

In short, the development scheme which needs Aesop is not intended as a mystery show given to the Africans by the white magicians for their own profit. It is intended as a mobilisation of all the talents.

Such a conception of course is not a piece of philanthropy. It has been described by the Eurospace Secretary General as "an advanced marketing operation" and its roots lie in enlightened realism and a far-reaching spirit of humanity. There is no reversion to relationships of dependence and domination, because there is an underlying conviction that exchanges between Europe and Africa will be all the better for being on a footing of equality, so that the clarity with which the reports are put forward introduces a modern style of fruitful cooperation.

If things were being done **for** the Africans instead of **with** them, it would amount to maintaining a chronic state of underdevelopment and Africa would not be a partner who pulls his weight. On the other hand, an Africa which knows the ropes will be on a footing of equality and will be creating a durable relationship.

It is good sense, both in theory and in practice, that the Africans should have the last word in a measure for african development. Nobody marches behind the banner of new cultural values, unless he has first absorbed them; and who can absorb these new values better than those who speak the same language?

It is becoming increasingly clear that innovation in development calls for confidence in the natural and established leaders. It is they who can best give form and significance to the inchoate aspirations of the tribe, and it is they who know and understand the channels through which messages circulate in the community. It will matter less and less whether these leaders are masters of the written word. In our modern horoscope the Marconi galaxy is in the ascendant and the power of the Gutenberg and Caxton galaxies is beginning to wane. The prestige of word-of-mouth tradition will again be on the up, and it will be improper to call people uneducated for the mere reason that they cannot read.

Three suggestions

There are, nevertheless, a number of conditions which may determine the success of deliberate and generalised africanisation. Three of these should be mentioned here.

1. If those in charge on the african side are to take the initiative and keep it, they must be careful to avoid short cuts. By this I mean, more especially, they should not order the software for rural education from specialist firms in Europe. There would be two risks in this. They might find themselves listening again to the old warblers of the colonial period, now nostalgically slumbering under the european eaves; or they might be overwhelmed by the vigour of present-day technologies and marketing techniques, and never acquire for themselves the experience and knowhow which spell the end of the period of dependence.
2. Unless the rural world is made attractive to youngsters at school, there is a risk that it will not draw into its service the full manpower of Africa. It will be a hard task to find men of real talent who are lovers of the rural world, and into whose hands must be put the instruments for serving it, a time when people are so apt to take up a trade simply as a step on the ladder towards higher pay and social standing. It is these men, when they are found, who will have to be taught how to master the interplay of medium and message.
3. There will have to be a determined campaign to organise a suitable structure to bring the novelty into existence and look after it. Such organs may be national or regional. Their task will include a systematic review of available techniques and technologies, and the exploration of ways they can be put to use, so as to think up new approaches and assess the scope of those for which the initiative comes from elsewhere.

Conclusion

Project Aesop is only in its early stages, but it has now been proposed to several african countries. It would in fact have been impolite to refrain from doing this till the preliminary studies had been completed, for this would have amounted to seizing the advantage of having been present at the start, and might have resulted in the Africans being confronted with a fait accompli.

Aesop thus retains all its possibilities of becoming whatever is made of it by those Africans who agree to take the plunge into the experiment and making it fundamentally their own.

As we have seen, too, project Aesop does not conceal its commercial prospects. Nevertheless its promoters are convinced that good friends make good business and are out to turn their backs on facile and unfair bargains which flourish in the dry season and are washed away by the first rains. They think it possible to set out with true realism upon a road marked by the boldness of the objective and the clarity of the reports.

If such a project is ultimately to become a fact, and if it is to serve Africa as well as it could, it is a condition that the Africans play their part constantly and consistently in a loyal and dynamic spirit, strict in making the contribution expected of themselves as they are exacting of their european partners.

Aesop, it will be remembered, is the name of a poet of many centuries ago, who made it part of his message to say that the tongue might be your best friend or your worst enemy depending on the use you make of it. ■ S. SEBASONI-MANZI

The E.E.C. and technical cooperation

by Jacques FERRANDI
Deputy Director General in charge of the E.D.F.

Lecture given in Brussels on March 28, 1974 on the occasion of the International Conference of the European Committee of consulting engineers.

You asked me to tell you, with all the frankness of friendship, what the European Community expects of engineering offices. I think, however, that I should be dealing with only part of my subject if I did not put it into the wider framework of technical cooperation. I have called it cooperation and not assistance, even though this may seem to some of you to be a concession or even a complacency. In actual fact it is neither of these. In the first place assistance sounds like an act of charity. Secondly, the word suggests unilateral action, in which only one of the partners has any part to play.

Cooperation, on the other hand, if it is to be really fruitful, requires:

- first of all, free discussion and free choice by the countries concerned as to where this help shall be applied;
- secondly, a desire to receive it and assimilate it;
- and finally, a continuing national effort to integrate it into the country's internal structure and so make it superfluous as soon as possible.

For a long time we Europeans thought technical cooperation was not useful. In fact we had long been giving technical cooperation without knowing it, for we had been calling it colonisation. The change is not in the thing itself but the significance put upon it and the motives attributed to it.

Colonisation was by definition mercantile. Technical assistance is, also by definition, disinterested. The former marched under a big banner, the latter carries only a tiny pennant. The former set itself up in a conquered country and made itself at home, but the latter waits

till it is invited. In the former trade followed the flag; in the latter the flag is often hidden behind the grey matter.

Yes, we actually thought for a long time that technical assistance was, if not thoroughly useless, at any rate secondary, and that what really mattered to a developing country was a considerable supply of external capital. Financial investment was considered necessary and sufficient for solving the problems of under-development, and there were indeed a few spectacular successes to illustrate an idea which was widely held until the last 20 years.

The power, the will and the ability*

Nowadays we find it self-evident, almost a commonplace, to say that a country cannot go through the various stages of its development unless it has the power, the will and the knowledge.

The power is what we sometimes call the sinews of war, by which I mean capital. The will is the innate desire in the country itself to get something done, in which it relies first and foremost on its own force. The knowledge is the technique, the choice and definition of specific objectives, the calling into play of the resources needed for attaining them.

"When a country has no aim and no plan for attaining it, it is currently admitted that it is going nowhere or that it doesn't know where it is going" said the diplomat-economist—I did not say economist-diplomat—John Galbraith.

Planning accordingly became the pana-

* Editor's sub-titles.

cea for under-development. The result is, that none of the wealthy countries, or the international aid organisations, willingly gives finance aid and technical support to a country which does not put forward a definite plan. If it has not got one, they offer to make one for it. A country which has no development plan is apt to feel out of things, and is not allowed into the club, like somebody who has forgotten to wear a tie. Another result was also described by John Galbraith, when he said: we now have norms of economic development and hypotheses on the nature of the process of economic growth, some of which are highly developed in terms of mathematics and some of which are even completely incomprehensible. No doubt this is what accounts for their success among the experts of the western world.

The problems of under-development are simple

Though many think the contrary, I am forever repeating that the problems of under-development are simple. We can complicate them as much as we like by making enormous efforts to identify subtle points in the structure of these countries which are not there at all; but this is simply because we insist on using elaborate laboratory methods for making elementary diagnoses. An illustration of this, almost a caricature, came within my own experience in an Associated country which shall be nameless. I was visiting a university faculty, and the head of it took me to admire some of the ultra-modern apparatus which had been presented to it. First of all he showed me a scale which weighed to the nearest milligram, and then another which weighed to the nearest 10th of a milli-

gram. He added: "we've got yet another which measures down to a 1000th of a milligram". Admiringly I asked to see it, but he replied: "It isn't here; it is still in the storeroom. The earth vibrations are stronger than its sensitivity, and we could only use it with special apparatus operating in a vacuum and resting on a special support which we cannot make here". This is a typical case of technical abuse. At the same time, there is a certain taste for the esoteric, which has resulted in a game of word-making. Today the clearest of ideas and the most received of common concepts have to be expressed in incomprehensible words and complicated equations. I often wonder whether economic science, just because it is young and not very sure of itself, may not be at the same stage that medicine was in the days of Molière—forced to hide its uncertainties behind incomprehensible formulae.

Some of the assertions, nevertheless, are not lacking in arrogance. Now it is my conviction that the fundamental quality of any technique must be humility. I expect you know the quip "the economists forecast an economic recovery, but it is not altogether impossible that events may prove them right". When you see how many of the best forecasts are upset by the facts, how many of the most complicated calculations are contradicted by reality, you may well wonder how there can still be economists with such pretensions.

Modest, temporary and teachable

Technical cooperation, therefore, must always be modest. It must also be aware that it is temporary. Its disability, as well as its grandeur, is the knowledge that it is condemned to disappear. If effectiveness presupposes permanence, how can we look for one without the other? I believe that technical aid, parachuted in like a commando and disappearing just as suddenly, is not what developing countries expect from us. The experts of today are rather like the cavalry of Murat, or the panzers of Guderian—they open up easy breaches in the under-developed countries, but these close up behind them as soon as they are through. The expert arrives flashing like a meteor; but, cut off from his base, and with no logistic support, he is equally likely to fade away

and leave nothing but the memory of his shining trail. Keeping in the military metaphor, you will remember that it is the infantry that wins battles, and it is our job to find the infantry for the battle of under-development. There is no question of it coming in from outside. It has to be found on the spot, it must be discovered, it must be brought into existence, in short, it has got to be trained. This is where technical cooperation finds its real job, and its ultimate justification. It has got to bring in the knowhow and it has got to see that it stays there.

It is not only a matter of doing, but still more of enabling others to do.

No external aid, however great its competence and goodwill, can have a real success if it cannot count on an administration which is not only capable of receiving it, but also capable of assessing it, summing it up, passing it on and prolonging its action in the country.

Many criteria have been sought and found for defining under-development. They include the G.N.P., the per capita income, the lack of capital, monetary circulation, trade balance, predominance of the primary sector, school attendances, consumption of electricity and hosts of others. For my own part I do not need so thorough an analysis to recognise an under-developed country. If you want to give an exact definition of an elephant, you may find it difficult to do so accurately and in precise technical terms. On the other hand, when you come face to face with one, you recognise it pretty quickly. In the same way there is not a shadow of doubt that you can recognise the degree of a country's development from the quality, the effectiveness and the competence of its administration.

What help then can technical assistance provide in setting up such an administration? There is no question of simply declaring it incapable and condemning it without recourse. The job of the technical aid is to organise it and transmit to it the competence and effectiveness it lacks.

The American terminology is quite right when it adds to the "technical assistance of performance", a "technical assistance of communication". The more usual distinction between pre-investment technical cooperation (advice,

plans, study, research and inventories) and technical cooperation for training (bursaries, courses, vocational training centres) seems to me artificial. They are simply two aspects of the same need.

At the present time this technical aid is probably the requirement most urgently in demand in developing countries. Since the oil revolution the established distinction between the rich countries and the poor countries—which exactly coincided with the distinction between the developed and the under-developed—has got to be reconsidered. There are now countries which are still underdeveloped and consequently need technical aid. The west—and it is not the only such source—is ready and willing to respond to this demand. In fact it responds so generously, that it makes one giddy or even remorseful, to see the waste of grey matter of which the wealthy countries are guilty in regard to the developing countries. Gigantism may in its way be the most refined form of impotence. We all feel, in our confusion, that we must put an end to these Third World ballets and set some order in the Tower of Babel of technical cooperation. How often have we seen, without being able to do anything about it, how an expert, a consulting engineer or an engineering office sets out, one could almost say, on a tour of conquest, as if he were a discoverer going into an unknown land. From the outset he begins to find fault with everything.

I am not trying to say that everything has already been said and there is no more to be discovered on the African continent. On the other hand we have got beyond the stage at which geographers of old simply wrote on the map of Africa "hic sunt leones". In such fields, as in many others, the time of a fully discovered world is beginning.

The weak point about our technical cooperation does not lie in its competence or in its technical value, but rather in its excess of competence and its over-technical character or, to put it more precisely, in the incapacity to make the competence and technical aspects digestible in the country in which they are applied. It has been said that whatever is excessive counts as nothing. It is excessive to recommend the most advanced technique, the most elaborate industry, the most up-to-date agriculture,

in a country which is manifestly unable to assimilate it or keep it going. The under-developed countries have the unexpected good fortune that they can take short cuts in history and do not need to tread the long road the industrial countries have followed in search of progress. They are able to use many of the advances the developed countries have secured, and so gain several centuries in their development. On the other hand there are limits to this, and a mania for perfectionism may lead to the existence side-by-side of an ultra-modern sector, and an archaic one, which does not even know it is backward. As I said at the outset, the problems of under-development are simple, but it is easy enough to complicate them. An economic or financial analysis is not necessarily good because it is elaborate. What is set out in figures is not always exact. In the same way, what is underlined is not always what is most important, and what is obscure is not always profound. One of the most difficult things to get from an expert is a set of simple solutions, technically valid but adapted to reality in the country he is seeking to aid. Perfectionism is usually just a reflection of professional conscience, for each of us wants "to do a good job".

I can already hear you making objections to what I am saying. You will say I am proposing technical assistance in the bargain basement, perhaps even on retrograde principles. You will say I am offering an oil lamp when we are harnessing the atom, or a bicycle while Apollo XV is under construction. It is difficult to rebut such accusations, but balance and moderation are the key to everything. I am well aware of the courage it takes to put forward a modest but realistic solution to governments seeking to dazzle public opinion by some spectacular achievement. A reflection I read some time ago is still fresh in my memory. The author said, he had been poor in his childhood and did not now feel at ease except in shoes made to measure and luxury clothing. In some degree this is the malady and the temptation of all poor countries. The battle against under-development, on the other hand, is not only a technique for applying prefabricated solutions to predetermined problems. It is a campaign addressed first and foremost to people. It is battle which

cannot be won except in cooperation with the people in the country concerned. When technical cooperation loses sight of these fundamental truths, when technique gets the better of cooperation and forgets that it is not an end in itself, but an instrument in the service of a country, and must be adapted to local realities, it is just one of these overcomplicated and unduly heavy scaffoldings which end by concealing, or even crushing, the house they were expected to help build.

From the qualities I expect of technical cooperation, it is easy to deduce what I expect from engineering bureaux.

Competence, modesty, courage, realism

The first point is competence, with its twin sister efficiency. Neither of these is in doubt. The experience I have had with you in many years makes it possible for me to say this without its appearing a mere courtesy. I rejoice that the enlargement of the Community now brings within our compass additional professional experience and skill, of long tradition and worldwide reputation.

Why, however, must this sincere statement contain a grain of anxiety? It is simply because the danger which threatens you is that which lies in wait for all businesses which are successful. Engineering has made spectacular progress since the war, and indeed I think there are few examples so outstanding in other development sectors. What is to be feared is that we may surrender to the charms of our own successes and finally be conquered by our own conquests. It is difficult to turn one's back on interesting proposals, to refuse important contracts, even if you have not immediately at your disposal the resources and the manpower enabling you to deal fully with the tasks confided to you. At such a moment there is the risk of hasty recruitment and unsatisfactory work. At such times technical assistance, which appeared formerly as the most elaborate and the most exciting form of international cooperation, becomes like the tongue of Aesop, a makeshift, and the countries which have the benefit undergo it as a necessary evil.

Next on my list is modesty, and this does not mean lack of self-confidence. It is necessary, on the contrary, to have

some degree of confidence in accepting the resistance, and even the contradictions, of reality. As regards modesty and confidence you may recall how Napoleon, when he returned from the Russian campaign, admitted quite simply to the Council of State: "I ought to have stopped at the Moskova, but I was dazzled by good fortune". The important thing is, that engineers should not be too often dazzled by their technique and led to lose sight of the real needs and the real possibilities of the countries it is their responsibility to assist.

The next thing we expect to find in you is courage. You may ask what such a word is doing in such a context, and I will explain this quite frankly. For those governments which so short a time ago took over the responsibility for developing their countries, there is often a great temptation to go for solutions which are technically the most perfect, but which are also the most expensive, not only in the first cost but, which is much more serious, in their subsequent operation. The temptation is human enough, and it is not confined to developing countries. It takes courage in an expert, or a planning bureau, to be frank in putting those in responsible positions on guard against particular conceptions or technical solutions. The danger, as I said just now, is that of looking like a kill-joy. It is not pleasant to be lucid in such conditions, and turning a blind eye can often help to maintain optimism or even euphoria. I am nevertheless convinced that, in the long run, frankness of this kind brings its rewards to those who exercise it.

Finally, we would like to see in you a willingness to abjure that perfectionism which would transpose into a developing country, technical solutions which are fully and perfectly worked out, and probably excellent in Europe, but which are ill-adapted to African conditions. For once I am in full agreement with the development theorists who think they are uttering a truth which escapes the realm of theory, when they talk of the "unimaginative transfer of western experience into sociological environments which are very different". Technology, you may argue, is one and indivisible, and this I admit; but development is not exclusively a matter of technology. I would add that just as it is said, there are no sicknesses but only sick people, in the

same way there is no under-development but only under-developed countries, each of which has its own characteristics, its own particular needs, its own potentialities and its own specific solutions.

These are the solutions which consulting engineers, bringing their experience to bear, should seek to identify and secure that they are accepted by local administrations, or the financing organisations. This integration of your thinking into the specific data of the countries where you are working, implies a final rejection of what I have called commando operations, the results of which seem on the whole to be so mediocre. Please don't interpret me as saying anything I have not. It is not a question of reserving the planning assignment in any country to the bureaux which have already worked in the same country. It is, on the contrary, necessary for ideas to circulate and I am one of those who believe that the claim of african experience often means less than technical competence and commonsense. On the other hand, a point which has struck me since I became concerned with these problems has been the shortness of the time some of the bureaux give to their assignments in the countries concerned. I know, of course, that many of the tasks can be dealt with more economically in the office and may be could not be handled elsewhere. If this practice is carried to excess, however, it leads to a number of obvious inconveniences:

- the national Administrations are not able to keep in touch with the progress of the study;
- the bureaux are not long enough in contact with the local realities, which is apt to lead to bad adaptation, of which I spoke just now;
- the bureaux are not in a position to take a valid part in training the local staff.

I think a considerable effort has still to be made in this field, even if, as has still to be proved, the cost of the work is affected. An interesting solution might probably lie in increased cooperation with local planning or engineering bureaux. Even with studies these bureaux are not capable of undertaking single-handed, this would enable them to gain more experience and push ahead with staff training. Unfortunately local bureaux are few and far between; and in their absence I think it might be a good

move for the european bureaux, in any specific study, to enlist the cooperation of young african engineers who would thus get some of their training actually on the job. It might thus be possible to develop a system of real cooperation, which is the basic target.

The four qualities I have mentioned—competence, modesty, courage and realism—can flourish only in an atmosphere of loyal cooperation with the administrations and governments of the countries concerned. To quote the old song "it isn't so much the gallant who woos as the gallant's way of wooing". Everything depends on the style, and this is true for human relationships generally. In this connection I should like to remove an ambiguity which has sometimes marred the reports of planning and engineering bureaux, both with governments and with international aid organisations. To us there can never be any doubt. The sole person responsible, the sole master of the operation, is always the government of the aided country, and it is under the authority of the national administration that you have to exercise your activities. You know better than I do, that people who have fully understood this item in the basic data, have got on well. There have been many experiences to confirm this.

The responsibility of the engineering bureaux

If my talk has been rather long, I must excuse this on the ground of the great interest we take in the discussion. I cannot close without saying a word on the important problem of the responsibility borne by the planning and engineering bureaux. This responsibility is all the greater because it is difficult and often impossible for the master of the operation to check the points in a study, or even to appreciate its quality. This inevitably means that relations between the master of the operations and the planning bureaux must be based fundamentally on mutual confidence. The only problem—and up to now it is still unanswered—is to know what happens when this confidence proves misplaced. We are looking for an answer, but we have not found one. I think it is in your best interest to help us in the search.

I fully agree engineering can be an

agent of progress and development. I would even say this is self-evident. But it is only true to the extent that our civilisation remains mistress of its technique, to the extent that we set precise limits on the technique indispensable though it be, laying down well defined objectives and requiring it to adapt itself to the human and social conditions of the society which is to be developed.

It has always given me pleasure to consider that the words engineer, ingenious and genial have the same ancestor and are thus first cousins. I am not quite sure whether my belief is confirmed by the language experts, but for all that they are three words with which it is a pleasure to play.

We are coming into a period in which the ingenious, the inventive and the imaginative are more necessary than they have ever been. I do not hesitate to say that we are entering into a revolution. As you well know, a revolution does not consist of the sack of a Bastille or the mutiny in a battleship Potemkin. All that is just folklore. What is happening under our very eyes blows no trumpet and sheds no blood, and thus it is apt to pass unnoticed by most of our contemporaries. **Revolution** is a name I give to the **irreversible change** in the traditional relations between countries, it is the **inevitable alteration** of the rules of a game which has been played for centuries to the sole benefit of the West. Today we have learnt from the energy crisis that a situation we had thought fixed and everlasting has become unacceptable and even intolerable. What seemed impossible is today the inevitable.

This crisis has revealed—and revelation indeed it was—that a distinction which was part of our tradition has now got to be put away in the attic. This is the distinction between developed and undeveloped countries, between industrial and non-industrial countries, between rich countries and poor, between east and west, between north and south. Today there are only countries which have something to sell and countries which have something to buy, and this covers practically the entire world. Between all these countries the game must be played under **different rules**. We must get away from the old liberal

(read on p. 47)

Industrial cooperation with the Associated countries⁽¹⁾

by Dieter FRISCH

The need for industrial cooperation

It is now clear, both in theory and in practice, that real social and economic development in a developing country can rarely be based solely on mining, agriculture and forestry, the so-called primary sector. A parallel development in other sectors, especially industry, is needed to provide the consistent growth of the national product and jobs for urban populations, among which there is increasing unemployment throughout the Third World.

In the long run no development policy can escape this, and any cooperation policy must sooner or later allow for it. In recent years the economic cooperation between the European Community and the Associated african countries, Madagascar and Mauritius (A.A.S.M.) has been increasingly tending in the same direction. As the Association developed it became clear that european aid could not be limited to finance programmes which mostly covered only infrastructure investments. It became necessary to promote directly productive activities, the growth of which would in its turn call for new infrastructure programmes.

Diverting the aid into industrial cooperation

The progressive channelling of Community aid into schemes designed to

stimulate industrial development in the Associated countries is to be seen in the accounts of the work of the European Development Fund (E.D.F.) and the European Investment Bank (E.I.B.), the two executive organs of the Community cooperation policy.

Leaving most of the details aside, it can be seen that the first E.D.F. (1958-63) was mainly concerned with financing infrastructure schemes. These took about 80% of the fund against only 19% for directly productive projects, of which only 1% was for projects concerned with industry proper.

The second Fund (1964-69), which was supplemented from the outset from the finance resources of the E.I.B., was much more concerned with productive activities, though these were primarily those connected with agriculture. In this period the Fund and Bank interventions in infrastructure schemes amounted to no more than 53% of the total engagements, whereas 43% went for "productive" projects, including 13% for industrial propositions.

The third Fund dates from 1970 and continues till the beginning of 1975 so that it is too early for an analysis of its activities. Up to the present it has only been able to engage about two-thirds of its total resources. A major financing programme is to be brought forward

for decision in the next few months, containing important infrastructure projects and others for agricultural and industrial production. On present indications it looks as though the third Fund will have put as much of its resources into production, especially industrial projects, as its predecessor.

After this description of the general line of the Fund and Bank programmes, the next step is to identify the main categories of industrial project for which the Community has undertaken engagements for the benefit of industrialisation in the Associated countries.

Sectors of intervention

These industrial projects include manufacturing industry, extractive industry and energy production. There are four main sectors of intervention:

- studies and research programmes regarding the industrial sectors;
- specific intervention for industrial infrastructure;
- the teaching and training programmes, in so far as these are connected with industry;
- and finally, the directly productive industrial investments.

The directly productive investments have been given priority. Between 1968 and the end of last March, they absorbed u.a. 106 m., or 62% of all the interventions relating to industry. A considerable sum also went into the industrial infrastructure, which took u.a. 48 m., or 28% of the total. The allocations

(from p. 46)

law of "laissez-faire-laisser-passer", which the West has only too often interpreted as meaning "let me do, let me pass",

In this new deal Europe has something irreplaceable to give to the Third World, and thus to **thousands of millions of human beings**. This is its knowledge of technology. The way she will give it to these multitudes whose eyes are fixed

upon her, will be the determining factor in our future relations with three quarters of the world. Here is a big responsibility, for she must induce the demand for the technology, secure its acceptance and its assimilation without setting up counter-reactions, or in the jargon of today, "without giving rise to a **rejection phenomenon**". Perhaps I can conclude by adapting a remark of Paul Valery: "Intelligence without technique amounts to very little, technique without intelligence amounts to nothing." ■ **J. Ferrandi**

(1) Extracts from survey by Dieter Frisch, Head of Division, representing the Commission of the European Communities at the meeting on Industrialisation in the A.A.S.M. (Milan, April 22, 1974).

for training schemes and the study and research programmes were on a more modest scale, the former taking u.a. 12 m., or 7% of the total and the latter u.a. 4 m. or 3%.

As regards the mode of finance, it can be seen that 62% of the total financing, an amount of u.a. 105 m., was in the form either of normal loans from the European Investment Bank, or loans on special terms from the second and third E.D.F. Finance by non-repayable grant accounted for u.a. 65 m., or 38% of the total.

Industrial cooperation in the second Yaoundé Convention

The growing importance assigned, as we have noted, to aids to industrialisation corresponds quite closely with the main orientations of the successive Association régimes between the E.E.C. and the 18 (and later 19) Associated countries. In the first two régimes, the industrialisation of the Associated countries was one objective among many; but in the present Association Convention, signed in 1969 and generally known as Yaoundé II, it plays a more important part.

The Association has quite a number of instruments at its disposal for promoting industrialisation. These are well fashioned and make it possible to deal with most situations arising in relation to industrial development. This applies to plans and studies, to industrial infrastructure, to specific training schemes and to the execution of the industrial projects themselves.

In the first instance the Association Convention provides a full range of methods for the financial handling of the schemes. Some of these were new. They include:

- grants or subsidies;
- E.D.F. loans on special terms;
- loans on normal terms by the E.I.B.;
- interest rate rebates given by the E.D.F. in respect of loans made by the Bank, under a simplified procedure, and providing much bigger margins than

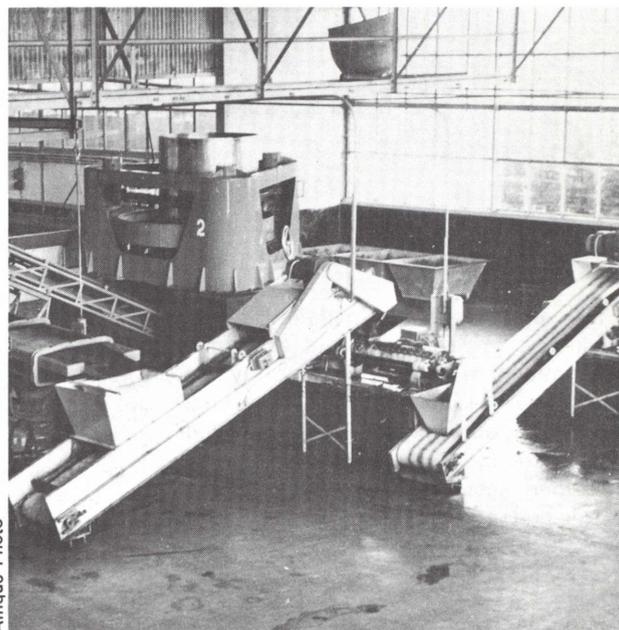
in the past. For example, the rates of rebate are higher when the investment is to be carried out in regions which are only slightly industrialised, or which are particularly distant from the sea; — the taking up of a share holding participation financed by the Fund in the equity capital of the firms concerned.

It is now possible, too, for the development banks in Africa, and similar institutions, to be used as finance intermediaries. This may be an important factor in encouraging the growth of small and medium undertakings.

The general framework of the Association tends to promote closer relations between the economies of the E.E.C. countries and those of the 19 Associated States, and thus ranks as an inducement to private industrial investment. Inasmuch as the Associated countries have duty-free and quota-free access to the markets of the Community, the trade system between the two groups of countries favours the growth of exporting industries. It is true, on the other hand, that this advantage to the Associated countries has been somewhat mitigated by the introduction of the generalised preferences system in favour of developing countries as a whole.

The commercial promotion measures envisaged in the Convention are another important instrument for stimulating industrial development.

Moreover, the E.E.C. Commission, by agreement with the A.A.S.M., has undertaken studies of definite industrialisation possibilities in the Associated countries, thus providing the governments of these countries with an instrument for information and action and calling the attention of potential sponsors to investment opportunities. A first programme on these lines was completed in 1967. A second, concerned with exporting industries, was recently completed and will shortly be published.



Afrigue Photo

Tea factory, Burundi.

Prospects of industrial cooperation

Now that the present Convention of Association is nearing its end, both groups of countries are considering the future prospects for such industrial cooperation between the Community and Africa. Negotiations opened last year for a new Association Agreement with the present group of Associated countries and the "Associates"—countries to which the Community has proposed Association—and all of them have expressed their desire that industrial cooperation be ranked as a priority objective in the future Association. They rightly put it on a different plane from simple finance and technical aid. Industrial cooperation brings into play a whole series of instruments, and financial and technical cooperation, important though it is, is only a part of the picture.

Though the negotiations have still to be completed, it has already come out that the Community is prepared to fall in with this request from its partners, and to make a factual study of possible ways of promoting industrial cooperation with them. This will not be solely in the interest of the Associated countries—most of which rank among the least industrialised of the developing countries

of the world—but also in that of the Community itself as rightly understood.

Towards a new international division of labour

It is well known that the highly industrialised countries of the Community have reached a stage in their economic and social development which requires some degree of change in their production and economic structures, and indeed in their consumption habits. The factors determining this reconstruction are also well known. On the one hand there is the scarcity of labour in our industrial countries and the high cost of obtaining it; and there are the changes and expected changes in the markets for various raw materials and energy products.

The highly industrial countries, especially those in Europe, are faced with stationary populations, high costs and growing difficulties in the large-scale employment of immigrant workers. They are now beginning to realise that the future growth in their production and income per head can only be secured in the long run by a continued growth in productivity. Apart from technical progress, the principal source of a growth in general economic productivity is a continuous transfer of capital and manpower resources from the less productive into the more productive sectors, which are of course the most profitable economically. A change on these lines must not be impeded by the prolonged protection of industries and sectors where the productivity is low. They need to be given suitable means and encouragements to abandon their less productive lines or to transfer them abroad, so as to liberate manpower for more remunerative lines for the national economy.

This is the meeting point of the interest of developing countries and industrial countries. In the industrial countries the industries most threatened in the productivity race are those which use large quantities of manpower. These labour-intensive industries seem the most interesting from the standpoint of developing countries, because they hold out a valid answer to the growing

problem of urban unemployment and shortage of capital from which these countries suffer, and they correspond with the general characteristics of their manpower resources. Still more important is the fact that they are industries in which the wage level is low; and the general characteristics of the labour market in developing countries could be reflected in a competitive advantage and competitive prices in world markets.

This foreshadows a change in the division of labour between industrial countries and developing countries. The advantages inherent in it are obvious, both from the national standpoint and from that of the world economy. The process, however, is making only a hesitant beginning, which differs materially from one country to another and from one industry to another. There are many reasons for this slowness, technical, economic and socio-political.

In the industrial countries there are evident and much publicised interests and obstacles which tend to slow down the process. In the developing countries, on the other hand, it is less apparent that there exist concatenations of political, social or economic forces to act as brakes on the integration of their economies into an international system of trading and the division of labour.

Elements of future industrial cooperation between the E.E.C. and its Associates

It is thus clear that the pre-conditions for the economic reconstruction, and thus for industrial cooperation between the E.E.C. and its Associates, have yet to be created. This applies both on the European side and on the African.

The problems arising among the Associated countries lie outside the field of this survey. It will therefore be limited to a sketch of the main lines on which Community action towards industrial cooperation could develop in the years ahead.

The Community has three main sets of instruments for promoting industrial cooperation with the Associated countries. These are:

- commercial policy;
- financial and technical cooperation;
- information campaigns and the transfer of industrial technologies.

Under the heading of commercial policy the position is reasonably straightforward. The present Association régime, and probably also the future one, provides free access to Community markets for goods from the Associated countries. This includes industrial products and there are very few exceptions. The action required includes the elimination, so far as possible, of the outstanding exceptions and a serious attack on the non-tariff obstacles. The latter include, for example, veterinary and phyto-sanitary regulations, which still keep some of the exports to the Community from the Associated countries in check. Another problem is the integration of production in the Associated countries into the commercial system of our own countries. It is under this head that assistance in commercial promotion has a role of primary importance to play.

The Community is prepared to contribute very widely to securing solutions for these problems. It intends to adopt an active and open commercial policy, and thus to lay the necessary foundations for all subsequent efforts towards industrial cooperation.

For financial and technical cooperation, the resources available should certainly be increased, and there should be some degree of diversification and added flexibility in arrangements for its operation. The financial clauses of the new Association have not yet been negotiated, but it is understood that the Community proposals under this head will be guided by two principles. The first is the maintenance of the advantages the existing Associates have already received; and the second, is the necessity for enabling the new partners to enjoy equivalent terms.

In the form of support given, the question is less of innovation or creating new measures, than of giving more depth and precision, and thus greater effectiveness, to machinery already in existence. Some forms of financing and technical cooperation which have

not been much used in the past might be applied more often—for example, specific training for the requirements of particular industry. Other instances are specific aid for small and medium firms and the leasing of industrial equipment.

There remains the question of information campaigns and the transfer of industrial technology. This is the field in which the Community should make the chief innovations and bring new instruments into play.

The experience of recent years has

countries. This is a side of the work which deserves to be carried further and handled on quite a large scale.

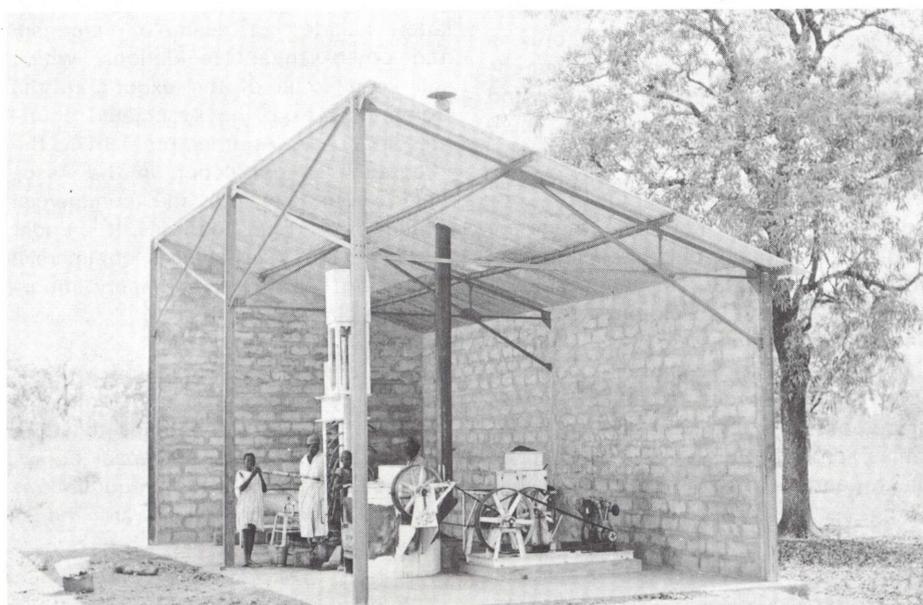
Special attention should also be given to the problem of transferring industrial technologies into the Associated countries, and especially to adapting these technologies to the specific possibilities and requirements of the countries concerned, with a special eye to what could thus be done to remedy underemployment in economies in which capital is rare and manpower abundant and cheap. This is almost entirely new ground for Community cooperation,

reflections we have made on the prospects for this cooperation, the Community as such can hardly fail to realise that it can only prepare the ground by an adequate commercial policy, intensified financial and technical cooperation and setting up an adequate system of information and contacts. On the other hand, it cannot take the place of the industrialist and the industrial company, in whose hands is the ultimate responsibility for setting up and managing an industrial undertaking. This is the field in which European industries could and should take action. In so far as the basic principles in any given State do not preclude private support from abroad but welcome it, European industry should seize the changes available as a way of cooperating industrially with the countries concerned.

Nobody is asking European industry to commit suicide for the sake of developing the Third World. On the other hand, we have seen that closer industrial cooperation with these developing countries is a matter of interest on both sides, alike for countries which need industries and for industrial countries and their industries themselves. European industry will bring to these countries capital, technology and organisational and commercial knowhow. Against this it will have the benefit of the new markets it is opening for itself, new sources of raw materials and energy products and access to reserves of manpower, such as Europe has long lacked.

The Commission of the European Communities is convinced that this industrial cooperation with the Associated countries is not only desirable and advantageous on both sides, but that it is in the long run inevitable. It accordingly asks the industries of Europe to open their minds to this idea, seek information on its possibilities and keep consistently in mind the question of how it can integrate its own structure into this cooperative process. It also asks that industry should keep it informed about its ideas, the action it proposes and the problems it encounters. The Commission is prepared to work in close cooperation with industry on all these questions, and hopes that industry will view the proposal favourably. ■

D. FRISCH



The most modest industrialisation projects are sometimes the most suitable for Africa's real needs. Above, a karité press built by the EDF at Katiebouyou (Mali)

shown that there is among European industrialists a real need for information about the Associated countries and their development potential, their programmes, investment projects and the conditions on which industrial firms can set up in their territories. The Community should seek to deal with this requirement better than in the past, stepping up its activity in compiling studies, documentation and information on all aspects of the question in Europe and in the Associated countries, on anything connected with industrial cooperation. It should also organise contacts between the European industrial world and industrialists and administrations in the African

and it will have to feel its way—as has indeed been the case with all the national and international programmes currently operating on this question.

Need for European industry to support industrial cooperation

Last but not least, what part will European industry have to play in industrial cooperation between the Community and the developing countries which are its partners? From all the

Legislation in the Somali Democratic Republic

by Girolamo Marotta GIGLI

At the time of the proclamation of its independence and the unification of its territories, Somalia had three different, coexisting legal systems whose individual scope was not always well defined except by geographical factors. In addition, there were very few bases for coordination.

Three different legal systems *

These systems were the following: Moslem law, the rules of Islam—a widespread body of law, codified and applied throughout the whole territory and commonly known as the Sunnite Sharia of the Shafii school; the Italian codes of civil and criminal law, with their respective procedures, which were introduced by the Italian authorities and applied in the southern regions; Common Law or legislation based on the English model, which was imported or framed by the British authorities in the Protectorate regions (formerly Somaliland).

There also existed a very old and composite body of customary rules dating back to an original Somali law (heer or testur) which, besides finding widespread and natural application in resolving disputes and maintaining peaceful coexistence between the various ethnic and family groups, at times acquired force of law through express references to it in specific provisions contained in the above three systems.

The problem of unifying the legal systems was tackled immediately after

* Editor's sub-titles.

the proclamation of the Act of Union (1961) as it was the main objective to be attained for true integration of the country's peoples and territories. However, it could only be solved slowly and by stages partly because of the practical difficulties involved in drawing up all the necessary legal instruments in a short time and partly because of the need to make a wise choice between the models of which the country had experience up till then. At the same time, the system chosen had to respect the country's culture and local traditions and take account of the most modern ideas and the need for it to fit in and adjust to an international context.

However, this choice was mainly conditioned by Somalia's belonging to the Moslem community, whose sole source of law is Islam. In fact, the Constitution which was promulgated on 1 July 1960, and formally laid down the founding principles of the Somali nation, derived from the religion and doctrine of Islam.

When, owing to subsequent political events, the government resulting from the revolution of 21 October 1969 first suspended and then permanently repealed that constitution, the principles of Islam remained intact partly because they were deeply rooted in peoples' minds and partly because they were expressly mentioned in not a few legal provisions.

This does not mean, however, that Somalia does not have a heterogeneous legal system accommodating the highly

varied ramifications of legal practice and springing both formally and substantively from models differing from those of Moslem law. The latter—as has been said—constitutes the basis, a fundamental standard and at the same time a guarantee of a faithful and strict observance of the teachings of the Holy Book of the Koran.

Drawing up codes

Right from the beginning of their work on unification, the legislators concentrated on drawing up codes, that is, basic instruments which would contain all rules and regulations, thereby departing from the English and Moslem legal systems, neither of which are codified.

The plan was to have four codes reflecting a division of the law into the codes of civil and law and the respective separate procedures.

The first of these, the Code of Criminal law, was published in 1962 and is still in force. Based on the Italian code of Criminal Law of 1931, it makes the same subdivision of crimes into misdemeanors and infringements and takes over the principles of "riserva legale" (area in which the Parliament alone may legislate), the non-retroactive effects of criminal law, personal criminal responsibility, and so on.

However, the influence of the principles of Islam and the commandments of the Koran can be found in many of

its provisions, the most important being the retention of the death penalty for murder and the severe penalties inflicted for the consumption or purveyance of alcoholic beverages.

A Code of Criminal Procedure (based on Anglo-Indian models), unlike the substantive Code, was published and entered into force in 1962.

It adopted what is known as the accusatorial system which dispenses with a preliminary hearing by the investigating judge and the decision as to guilt or innocence is taken at the trial, in which the accused is on an equal footing with the prosecution.

The Code of 1963 also introduced (with results which are not always satisfactory) the cross-examination of witnesses, in which the witness undergoes successive examination, cross-examination and reexamination by the defence and the prosecution.

The difficulties of applying this method have produced a situation where the judges' statements and authority prevail in practice in hearing oral evidence.

The Codes of Law and Civil Procedure were not drawn up as quickly. The differences between the known models in this field were too great, with the result that their respective proponents put up sterner, more intransigent resistance. These difficulties were overcome by modelling substantive law on the Civil Code of Egypt, an Islamic country which had in turn adopted the theoretical classification derived from the Code Napoléon.

The Somali Civil Code, which entered into force on 1 July 1973, may be defined as an instrument which, while upholding the principles of Islamic Law (expressly referred to in Article 1), is part of the family of Roman law systems of the French type and therefore bears some resemblance to the Italian Civil Code of 1942.

The code is subdivided into a Preamble containing general provisions and two

Parts, the first of which deals with obligations and contracts and the second with rights *in rem*.

The Preamble contains, in addition to provisions on private international law, modern criteria designed to facilitate relations between different peoples. Part One respects the principles of according the parties maximum freedom of decision in making contracts; liability is dealt with following the precepts of Roman and Italian jurisprudence.

In Part Two, the laws on private property are based on the recognition and protection of these rights, the sole constraints being the obligation to respect the law and to comply with the requirements of the national economy in the use of productive property.

Family law is not included in the code, since it has been governed up till now by rules of a largely religious nature; nor does the code embody commercial law proper.

The Code of Civil Procedure is in the process of being drawn up with the following objectives in view of achieving maximum streamlining and speed in procedure: conferring broad powers of control on the judge; bringing right of appeal within reasonable limits; and ensuring real efficiency in the enforcement of judgments. At present, the rules governing civil proceedings are those contained in the Italian Code of Procedure of 1942, the Anglo-Indian Code of Civil Procedure and the Ordinamenti Giudiziari General rules of law published in 1956 and 1962.

Special laws for particular subjects

Naturally, the general outline given here does not cover all Somali legislation. Apart from the codes themselves, which lay down the general rules, there is also a body of special laws governing individual subjects. Some of these laws date back to the period before

the codes were drawn up and have remained in force where they are not incompatible with the codes. Others were formulated in parallel with the codes or afterwards to meet the State's organizational needs to regulate economic activity and, more recently, to harmonize legal structures along the socialist lines chosen by the country. The first of these include the law on exchange and the law on the carrying out of public works, the second those regarding the organization of the various ministries and the Consolidation Act on direct taxes, while the last comprise the law on security of employment, those on letting and on the transfer of property rights, the Labour Code, the regulations governing insurance and social security, etc.

Amending the legislation

As has already been mentioned, there is an acute awareness in Somalia of the need to amend its legislation to take account of developments in law in other countries. Further indications of this are the acceptance and gratification of the international conventions on maritime law, the adoption of the precepts of the International Labour Organization, and a spate of references to the principles sanctioned by the UN and the OAU.

More particularly as regards the European Community, Somalia as an Associated State is obviously fully aware of the obligations it assumed on signing the Yaoundé Convention, but often the exact interpretation and application of the Convention requires more than a general commitment on the part of an associated country. On the Community side, however, widespread information on the actual legal situation in that country could undoubtedly help in streamlining relations and reaching common goals. This means that extremely close collaboration would seem to be desirable in this field to throw light on and thus solve the problems connected with development with the help of suitable legal instruments. ■

G. M. GIGLI

National Highway No. 2: Muramvya-Gitega

I. GEOGRAPHY AND TOPOGRAPHY

BURUNDI is a country of modest size, covering an area of 27 000 sq.km in the heart of Central Africa around latitude 3° south and longitude 30° east, lying between LAKE TANGANYIKA and ZAIRE on the west, RWANDA to the north and TANZANIA on the east and south.

The characteristic of its topography is the crest between Congo and Nile, which reaches altitudes of 2 700 m. and on the west overlooks the depression of the Ruzizi plane with a mean altitude of 800 m. bounding on the east a hilly country ranging between 1 000 and 1 200 m.

The mean annual temperature is around 20 °C, and the rainfall varies between 800 mm. on the western plain and 1 200 mm. in the hills.

The population consists mainly of farmers and stock-raisers. There are 3.35 m. inhabitants, so that the average density is 134 people per sq km with figures as high as 260 in various areas of

intensive cultivation. The urban concentration is practically limited to the capital, Bujumbura (pop. 100 000), which lies at the northern point of Lake Tanganyika.

II. THE ROAD INFRASTRUCTURE

1.1. The present position

Burundi is marked by its communications density of 200 m. per sq km, which is exceptionally high for Africa.

This is made up of:

- 3 000 km of classified roads, comprising 545 km of national roads (RN), 1 165 km of roads of general interest (RIG) and 1 290 km of provincial roads (RP). At present 136 km out of the 3 000 km are surfaced.
- 140 km of urban roadways.
- between 2 000 and 3 000 km of unclassified local tracks.

Though the road network is dense, its quality is moderate. Owing to neglected maintenance it is in very poor condition, and the roads are winding, narrow and have gradients which are stiff and long.

These factors tend to limit the speed of traffic, diminish the life of motorised vehicles and reduce the optimum load.

1.2. The prospects

The Burundi government has worked out an ambitious programme for road improvements. The European Development Fund has up to the present been concerned with financing work on 37% of the 545 km of national roads.

These are:

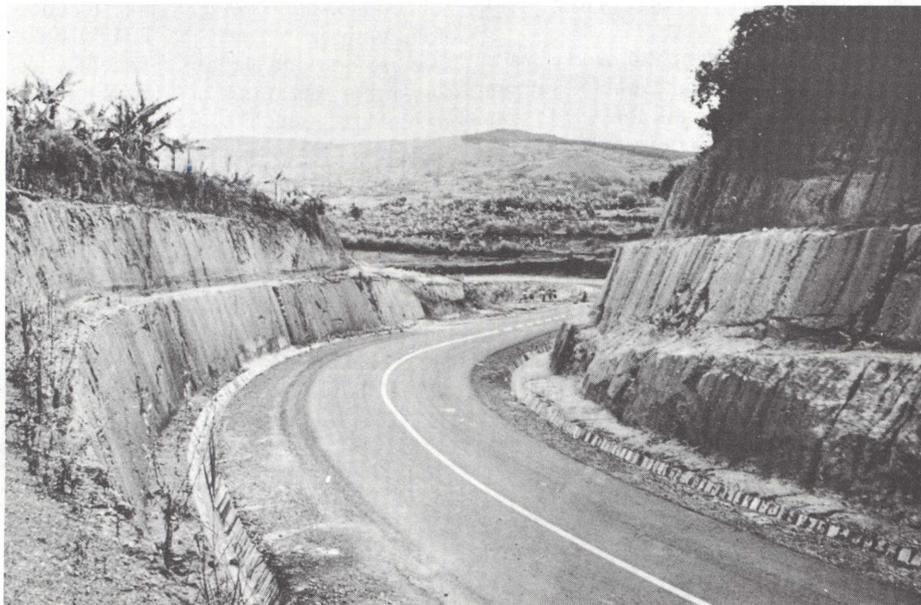
- National Highway No. 1, in which the E.D.F. was concerned with strengthening and improving safety on the existing road on the 34 km already surfaced of the section BUJUMBURA-BUGRAMA; and re-making the 84 km of the BUGRAMA-KAYANZA section to the frontier of RWANDA by improving the existing course of the road and providing an asphalt surface. This work was financed through the 3rd E.D.F., and has been in progress since January 1973, and is expected to last 3 years. The financial commitment in respect of it is F.Bu. 751 314 286, equivalent to u.a. 7 908 571 (u.a. 1 = F.Bu.95).
- National Highway No. 2, including re-building of 68 km between MURAMVYA and GITEGA, financed from the 2nd E.D.F.
- The section BUGARAMA-MURAMVYA (14 km) was re-built. This was financed from the 1st E.D.F.

III. NATIONAL HIGHWAY No. 2 - MURAMVYA-GITEGA

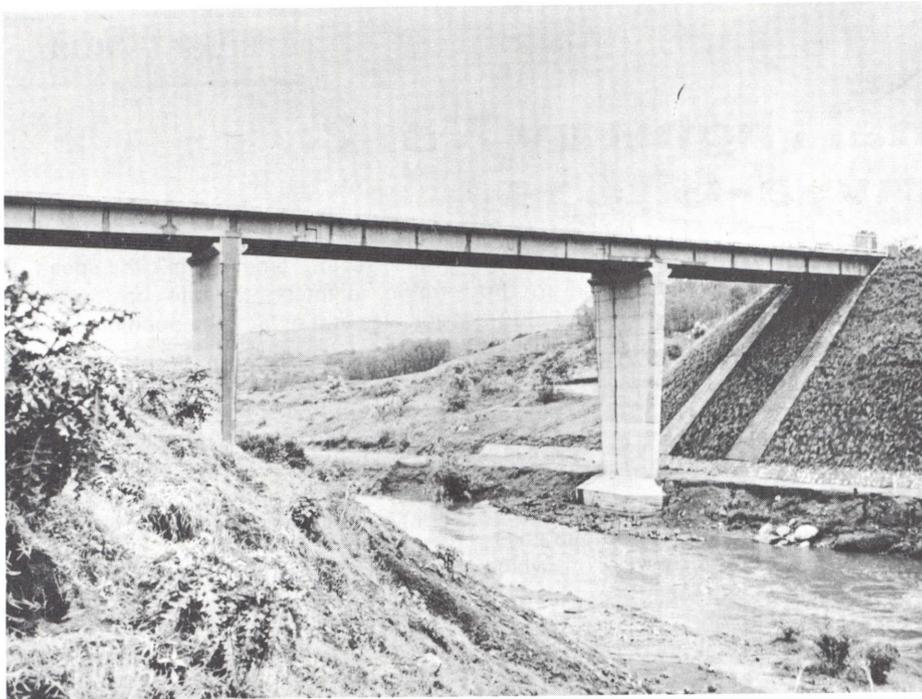
1.1. E.D.F. intervention - 1st phase: the survey

By finance convention No. 422/BU, dated October 26, 1966, the E.D.F. financed the execution survey for National Highway No. 2.

The survey was put in the hands of a german firm, the assignment of which included improving the course of the existing road by diminishing the curves,



The material used under this heading is taken principally from the reports of E.D.F. general and technical supervisors in the A.A.S.M.



easing the gradients, provide for surfacing and draw up a project of the necessary works.

The basic characteristics adopted for this road through a hilly country were as follows:

— **Course of the road**

Minimum radius of curvature 70 m., corresponding to a basic speed of 60 kmph with occasional sections limited to 40 kmph.

— **Length profile**

Maximum gradient of 7% which can be raised to 7.5% when unavoidable. Vertical radius of 1 000 m. for concave and 1 500 for convex junctions.

— **Transverse profile**

Straight road : carriageway of 5.50 m. on a platform width of 8.50 m. On curves: Banking and extra width depending on curve radius.

— **Constructional works**

The chief item is the survey for the Ruvyironza crossing.

1.2. Second stage of E.D.F. intervention: the construction work

Finance

By convention 577/BU dated September 16, 1969 by the 2nd E.D.F., the government obtained finance for carrying out the work, the total being u.a. 2 805 714, equivalent to 245 500 000

F.Bu (1 u.a. = 87.5 F.Bu at this time). This was subdivided into :

- Works supervision . . . 13 000 000 F.Bu
- Execution of work 232 500 000 F.Bu

The devaluation of the burundi franc in terms of the unit of account (1 u.a. 95 F.Bu) came after the signature of the finance convention, and called for revaluation of the finance available. This was accordingly raised to F.Bu 257 750 000.

During the period of the works, as a result of a number of unexpected factors and errors of assessment, the E.D.F. was obliged to increase its commitment, which was raised to F.Bu 318 950 000, or u.a. 3 382 674.

The execution

After a call for tenders the contract for the work was placed with a consortium of the firms ASTALDI-SAFRICAS-AMSTAR BURUNDI. The amount of the tender was F.Bu 239 247 983 and work began on January 24, 1971 with a time schedule of 24 months.

Supervision of the works was in the hands of two staff members of the Public Works Administration, and a representative of the German bureau which planned the project.

The works related to the improvement of the course of the road, which was

brought down from 68 km to 54 km, and the asphalt surfacing of the new section.

The construction works consisted only of drainage channels, except for the crossing of the river Ruvyironza. In this case the bridge was built of reinforced concrete and was 60 m. in length, standing on 2 piles in the river bed and 2 abutments. It crosses the river at a maximum height of 12 m. and has an 8 m. roadway allowing simultaneous passage to two vehicles and pedestrians.

The table of the bridge rests on six main girders with cross-stays. The girders were prefabricated.

The works were completed within the scheduled time, which had been raised from 24 months to 27 months. The increase was called for by the substantial increase in earth shifting and the difficulties encountered in building the Ruvyironza bridge.

IV. CONCLUSIONS

By re-laying the road axis RN 2 Muramvya-Gitega, the Burundi government has provided a quick link between Bujumbura and Gitega, which is the country's second administrative and cultural centre. It has also sought to accelerate the development of various regions:

— **Agriculture**

The provinces of Muramvya and Gitega contribute 25% of the national coffee production and a considerable tonnage of subsistence crops. In addition, with help from the E.D.F., these two regions and various adjacent ones, will in the near future be producing 45% of the tea, which is Burundi's second largest export product.

— **Population**

In view of the very bad state of the roads along the lake, which impede traffic with the Burundi region in the southern part of the country; and in view of the location of Gitega, which is the doorway to the eastern regions leading into Tanzania, and into the Mosso region along the frontier, RN2 is important as a quick link with regions containing more than half the country's population.

— **Pastoral**

It is estimated that the Muramvya and Gitega regions own between them about a third of the national head of cattle. ■

B. BRUSSET

CONGO

Pointe-Noire and the E.D.F.

The Peoples' Republic of the Congo is lucky in having a natural port, opening into the south Atlantic. This is Pointe-Noire. About 1930 it was the Pointe-Noire Bay which was chosen, mainly for hydrographic regions, as the deep-water terminal for the railroad which was to serve the right bank of the Congo and the Ubangi.

The port of Pointe-Noire lies on the west coast of Africa in latitude 4°47' S.

Construction of the port began in 1934, and it has been in course of extension ever since.

The port of Pointe-Noire consists of a basin, with a water area of 84 hectares, on the edge of which are three piers.

The important phases in the construction of the port were as follows:

— inside the external wall—rock-wall of 2 050 ml which was built in 1934/48, and as the work on construction of the wall advanced there were built:

- a lighterage quay in 3.50 m of water (1937);
- quay D, a principal quay in 9.20 m (1939);
- open ground between the external wall and quay D, filled in hydraulically in 1940;
- quay G, perpendicular to quay D (1942);
- pier 1 (1966)—financed by the E.D.F. to the extent of u.a. 5 669 000;
- an oil wharf.

Since the partition of the former French Equatorial Africa, the territory is divided into four independent countries: the Peoples' Republic of the Congo, the Republic of Chad, the Central African Republic and the Republic of Gabon. Of the last three, only



Trawlers at the quay-side in the new Pointe-Noire port

Gabon has direct access to the sea; but even through the Port of Evendo, near Libreville, was completed at the end of 1973, the manganese ore from Moanda and the timber from the southern part of the country will continue to pass through Pointe-Noire because of the COMILOG railroad and the port equipment available. For reasons of geography, the produce from Chad and the Central African Republic must necessarily have their outlet through the Peoples' Republic of the Congo, the waterways of which currently carry the trade of these developing countries. Waterway convoys sail on the Ubangi and the Congo as far as Brazzaville, at which point the river is no longer navigable. Goods are then re-shipped by railway (C.F.C.O.) to Pointe-Noire.

It is thus natural that the port of Pointe-Noire, which serves several countries, should be dealing with an excep-

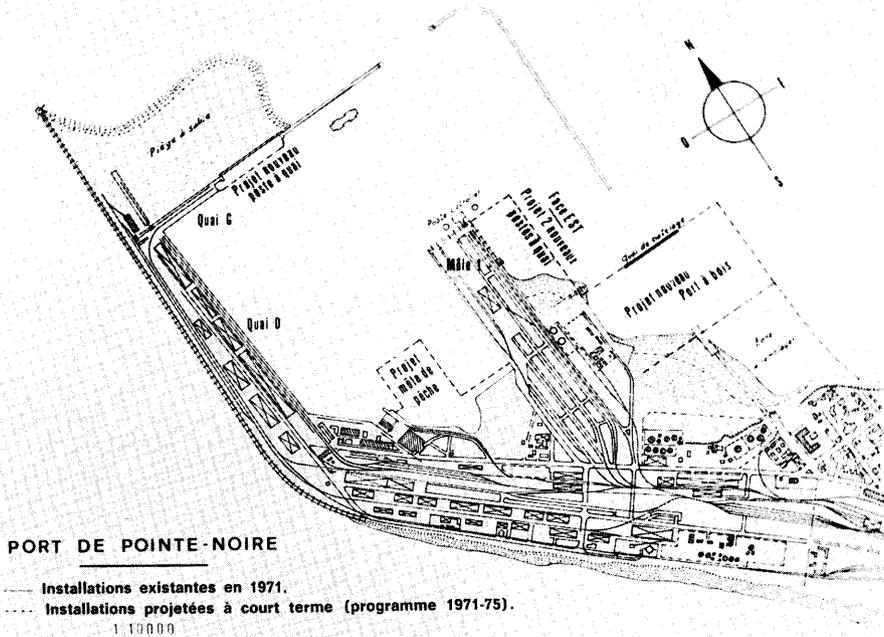
tional growth in its traffic, so that it is supersaturated most of the time. The growth in traffic took it from 767 000 tons in 1960 to 2.87 m. tons in 1970 and over 3.5 m. tons in 1973.

The responsible body, Agence Transcongolaise des Communications, accordingly appealed to several finance sources to provide for its development. The European Development Fund was well aware of the importance of this port for the development of this part of Africa, and consented to a number of applications for its intervention. It thus financed the following projects:

From the 1st E.D.F.: the construction of two new quay berths constituting pier 1.

From the 2nd E.D.F.: the survey by B.C.E.O.M. of a fisheries quay in 1971.

From the 3rd E.D.F.: purchase of a dredger in 1972; project for an ore-quay in 1973; and the purchase of a tug by a loan on special terms.



deal could also be said about the expanding timber trade, which raises many problems for the transport authority, and about the various cold storage facilities, fuel and bunkering, ship-repairing facilities and other aspects. The first thing to do, however, is to deal with the port's most important traffic, and the future has to be thought of in terms of this; but a general plan looking 15 years ahead was prepared by B.C.E.O.M. in 1972. It foreshadows two possible lines of development.

The total investment in the port between the reference date (1970) and 1990 amounts to nearly 17 000 m. CFA francs, on the basis of development in the centre of the bay; and nearly 26 000 m. CFA francs if it is decided to build the west port, which will be a new port adjacent to the first on the other side of quay G. These figures do not include the construction of the iron ore handling facility. If the Zanaga iron mines become operational in 1980, it will be necessary to find another 3 000 m. CFA francs if the solution adopted is extension in the centre. This is the cost of the new roadstead wharf to handle ships of 250 000 tons gross. The investment between now and 1990 thus comes to 20 000 m. CFA francs.

The port of Pointe-Noire will remain a matter for discussion for many years to come, and it is probable the E.E.C. will be asked for further facilities. Investments on this scale are apt to be a heavy burden on the finances of an individual country, but they are profitable in the long run, even though they are no more spectacular than most other civil engineering achievements. Help to Associated countries in marketing their national production is in line with the general wishes of the E.D.F. Participation in the extension of the port of Pointe-Noire is more than this. It is participation in the development of regions in the Central African interior who have not the advantage of direct access to the sea; and it is an investment in which the weather eye is turned on the future.

After all, one of the most indispensable factors in progress, and the path to a better life for everybody, is the easy movement of people and merchandise. ■

G. DALLERY

Including repayable and non-repayable aid, this makes a total of nearly F-CFA 4 000 m.

In 1971, a survey was made for a fishing port by B.C.E.O.M. from credits given from the 2nd E.D.F. The congolese authorities are very keen on this project, but the infrastructure needed in this field of intervention sets up considerable constraints. Up to the present fishing in the Congo ranks as an artisan occupation, and the project would mean organising it to create a new industrial sector. Nevertheless, the government has put the fisheries mole on its priority list and it will shortly be built.

In 1972 the port authorities asked for a dredger, and this was acquired with E.D.F. finance. The LOEMBE is of the I.H.C.—GIANT 1800/2300 type, equipped with two omnibarge lighters and about 1 000 m. of sea and land evacuation pipe. It is capable of maintaining the sea bed in the port of Pointe-Noire, and dredging out the access pass and the various improvements now scheduled.

At the same time, an important further project was put forward. This was the lengthening of quay G, which lies on the north-western side and had been built in 1942-44. At present it is 210 m in length, extending from the coast and with 10.20 m built onto the internal wall. Its width has been reduced by 30 m and its southern face has a berth in 10.25 m of water. Berth No. 6, originally designed for packet vessels, is

now mainly used as a berth for ore-carriers, which are the biggest vessels using the port. This pier is very narrow and has no adjacent handling space or covered sheds, and cannot handle vessels of more than 20 000 tons.

Work is to begin in the early future on the construction of a new deep-water quay, to be called the ore quay. It is to be 318.52 m in length and 35 m in breadth in 16 m. depth of water.

The solution adopted is a sheet-pile quay, based on natural ground consolidated by punning. It is to be aligned on quay G and will have the COMILOG ore-handling facilities.

Quay G will then revert to its original use for handling general cargo, while the new quay dredged down to 13.50 m, will be able to receive ore-carriers up to 65 000 tons. This will call for changes in the transport arrangements for manganese, including a tunnel under quay G. A new convention has also been signed for the financing of the sheds and other superstructure arrangements on quay G by a loan on special terms.

In virtue of another loan on special terms, a high sea tug of 1800 h.p. is now under construction. In the early future this will free the port authority from the need to contract with foreign towage firms, which now handle all the tug business and the movement of vessels putting into Pointe-Noire.

This is only a brief summary of what is going on at Pointe-Noire. A great

Talking to a poet: Raymond Chasle of Mauritius

The first interview Raymond Chasle gave to Association News was 18 months ago, when our edition in English made its first appearance. He is Minister-Counsellor in rank, Chargé d'Affaires and assistant head of the Mauritius Mission to Brussels. He is also a well known poet and many people in Brussels have taken pleasure in reading one of his works, "Le corrailleur des limbes" (the coral fisher of limbo), which was put on sale by the literary club of the European Communities for the benefit of the Sahel.

There have indeed been other cases in which a diplomat has been also a poet or man of letters but the combination is rare. Association News paid a call on Raymond Chasle to talk about the place of poetry in the modern world, and more especially about the poetry of Mauritius, which is little known in Europe.

► *Don't you think it rather difficult to be a poet at this time, when the general public seems so little interested in poetry, certainly much less interested than formerly? This is just the opposite of the way things were in earlier centuries. Why do you think this is?*

I am very glad to be able to talk with you about poetry, and this is a question to which I would like to reply straight away. The general public seems to have little interest in poetry for the simple reason that little is done to make it interested and it is deprived of poetry by the mass media. There are very few poetry sessions on television or the radio. The reader is apt to be frightened away by literary criticism, the obscure language it uses and the scientific-literary gambols in which some of the avant-garde indulge. I think, too, that there is a divorce between the reader and the poet, because the reader is not always aware of the way poetry has developed.

► *This is rather my feeling. My impression is that even among educated people, knowledge of the development of poetry has stopped short at symbolism, whereas in knowledge of the plastic arts they have gone some way further.*

It seems most people are affected by a certain backwardness, occasioned as you point out, by insufficient information from the mass media. It may also be due to those who devote themselves to poetry being less accessible than they used to be.

Nowadays the public's idea of poetry seems to have taken refuge in song. I must say I find it inconceivable, and shocking, that singers, however talented, should be confused with poets, as was the case in an anthology of poetry I have seen. I think, too, that the public is apt to judge poetry by aesthetic standards. The modern poet works on quite different lines. He is much more concerned with effectiveness. This of course does not exclude the aesthetic, but the modern poet does not write to create beauty, or even to be pretty-pretty. He writes in an attempt to transform the world, and his text therefore has to be transformational and operational. For this purpose he has to make his readers see things his way.

There are in fact very few real readers. Many people will glance through a book, thumb the pages and put it aside, saying that poetry is a closed book to them. In actual fact poetry is the highest

activity of the human spirit and I find it pretentious in any reader to take only a cursory glance at a poem and dismiss it by saying that he doesn't care for poetry or doesn't understand it.

► *You must admit, all the same, that many of the uninitiated find modern poetry somewhat occult, so that they have a way of thinking poetic language is only for the closed circle of the initiate.*

It has even been said that the poetry of today is a code for poets only. When the poet writes, of course, he is not thinking about the reader. There is something he has to say, and it is not till his work is finished that there is any question of seeing how far his text can establish communication between himself and possible readers. In the reader this calls for some degree of patience, and strict attentiveness. Take, for example, the Bonnefoy collection "Du Mouvement et de l'immobilité de Douvé". This is a long exercise, a patient sorrowful meditation about death. In my view the reader who sees it for the first time would be making a great mistake if he said the text was occult or inaccessible. Often the inaccessibility is in the reader himself.

► *I agree that an effort is required from anybody who hopes to read a work of poetry, understand it and take pleasure in it. You mentioned just now that poetry, and indeed the works of most present-day writers, contains much more commitment than was the case in the past. Do you think this is a necessity of the present time, or could one still, if I may so express it, write poetry for poetry's sake as was usual in the past?*

Personally I do not believe in poetry for poetry's sake, but I should like to make myself clear on this question of

commitment. It is not a question of party politics or any form of ideology. The commitment comes through consciousness of the need for changing and transforming the world, hastening the arrival of a better world, a full life which will restore freedom and dignity to mankind. I do not believe in poetry which is topical and dependent on events, though there was indeed much effectiveness in the work of Aragon, Eluard, Loys Masson during the Resistance. This, however, was because they had the genius which transcended the actual events. Real revolutionary poetry is that which gives the reader a new vision of the world, putting him back into the cosmos with which mankind has lost his links. There is nothing new about the atom, for the ancient Greeks were well aware of it; but today people no longer stand and stare at the sky, but look to the cosmic adventure, to landings on the moon, to the launching of satellites in space. All this sets up conditions highly favourable to bringing man back into the cosmos. It is one of the most exciting tasks of the poet of today to attempt to weave a web from these threads, to reintegrate mankind into the world, into the elements, into nature, into all the throb of the palpitating cosmos.

► *So you think that in the present period the work of the poet will be a help to mankind in his adaptation to the new world, the modern world, the world of tomorrow or the day after. For this of course, the poet has to be understood. Forgive my talking as a devil's advocate, but is there not among some modern poets a certain rejection of the disciplines of language and thought, seeking an easy refuge in abstraction which, to the uninitiated, is apt to appear somewhat pretentious? Is this not glossing over an inclination to take the easy road, and a certain unwillingness to make an effort? Forgive my frankness, but I know that this is a question many people ask.*

I think it was in 1948 that the great french writer Roger Caillois, published outside France his work "Les Impostures de la Poésie" (the Impostures of Poetry). In this he positively scourged those

poets who delight in verbal delirium. The book is extremely hard on the poets, but as the author admitted, it may have gone beyond his intentions and actually done more good to the poet than to the reader. Among the reproaches levelled at some poets today is that they do not always understand what they are writing, and that what they give the public is no more than a personal adventure unconnected with the creation of a universal order.

I think you are certainly right. There are still a number of writers who could like to pass as poets, but who have absolutely no message to transmit. We have to distinguish between what is real and what is false, and this is the case with all works of art. Among our gemstones there are real ones and imitations; but this does not mean that because some of them are fakes, there are not any real ones. The same applies to poetry. It is often the reader himself who rejects the disciplines of thought.

✦ *This reminds me of an international meeting in which one of those present kept interrupting the discussion with the protest: "Mr. Chairman, I do not understand". At last the Chairman, grown somewhat testy, replied: "After all sir, we can't understand everything". Doesn't the same apply to poetry?*

The poet's doubt about clarity and transparency are mentioned in the first poem in Coral Fisher of Limbo. I should like to quote the first few lines: "It is the hour of dying if on the line a hidden clearness does not whet the yearning for my speech in an unperishing growth and does not forge for it this union of hallucinating legend stretching beyond the power of folly"⁽¹⁾

After we in Mauritius had tried the surrealist experiment—for surrealism is not the monopoly of the Europeans—there came this desire for "clarity", and transparency. After the Coral Fisher of Limbo, the collection "Vigiles irradiées" (Irradiated vigils) attempts to keep this light alive, because I throw bridges from one poem to another inside the collection, and also from one

⁽¹⁾ Editor's note: our rough translation of Mr. Chasle's french verse has no literary pretensions.

book to another. I am carrying on with this adventure, for example, in the next collection, which will be called "L'Alternance des Solstices" (Alternating solstices), which is a sequel to the *Vigiles Irradiées*. Thus the reader who has made the effort to follow the path I have trod, will see that there is not a single redundant word in any of the poems I have written since Coral Fisher of Limbo. It may indeed happen that the reader does not understand everything I have written. You will note that once the poem is finished, I become my own reader and cannot understand everything I have myself written, but when I am writing I only write what I understand. If somebody from the 19th century were to find his way into a gallery of modern art, you can imagine his astonishment. I should expect much the same thing of a reader who has not followed the development of poetry since the beginning of this century, if he were to sit down to read Jacque Dupin's "L'embrasure", the last collection of Jacques Roubaud, or my own "Vigiles irradiées".

✦ *Could we now talk more particularly about Mauritius, and its poetry? Your country is a cross-roads of european, african and asiatic civilisations. This seems to be a fundamental feature. Moreover, everybody knows your country's reputation for beauty. It is thus natural that Mauritius should be a land of poetic expression, yet your poets are not very well known in Europe or in Africa, apart from a few, such as Loys Masson, friend of Eluard, Aragon and Max-Pol Fouchet. Would you tell us about some more of them, and give us an idea of the place of Mauritius in contemporary poetry?*

Mauritius is, first and foremost, a point of confluents for a number of civilisations. The european civilisation comes in because the island was colonised both by France and by England. Then there were the asiatic civilisations and the immigrant influences have been African, Hindu, Moslem and Chinese.

You spoke of Loys Masson, the Mauritius poet best known in Europe. It is worth remembering that it was

another great poet, Marcel Cabon, who initiated him to modern poetry. Loys Masson was very young when he left Mauritius, reaching France on the eve of the last war. He had the good fortune to live near Aragon, Max-Pol Fouchet, Eluard and several other Resistance poets. He lived in the maquis and after the war was director of Les Lettres Françaises. The circumstances of his life in France were therefore favourable, and enabled him to establish a solid reputation, both in France and outside it. Another name to mention is Malcolm de Chazal who, with the publication of "Sens Plastique" had a brief moment of celebrity in France. During the past 10 years, too, there has been Edouard Maunick, who became well known in Paris through the publication of two very valuable collections; and Jean Fanchette, who has been director for several years of the review "Two Cities", a bi-lingual publication which has helped to make France better known among many writers of English.

In Mauritius we have many poets, but there is always the problem of publication and distribution. Most of our poets and writers are obliged to shoulder their own printing expenses. Since these works are not in a publisher's hands, they get no distribution, apart from what is done by friends. This makes it difficult for us to claim to rank as poets outside Mauritius; and in my own case it is the reason why I was obliged to go to french publishers, because my work would have had absolutely no impact had it been printed in Mauritius. For a long time the poetry of Mauritius stayed outside the stream of modern development, and it was our first surrealist poet, Jean Erenne, who opened the path to modern poetry and got rid of the clutter of the post-Romantic period. The younger generation of poets is represented by Jean-Georges Prosper, who published his work "Au Soleil de l'Île Maurice" (In the Sunshine of Mauritius) last year in the "Pensée Universelle" collection. Other worthwhile poets include Emmanuel Juste, Joseph Tsang (First Counsellor at the Mauritius Embassy in Brussels) and Jean-Claude Davoine, who lived for several years in London.

Your country is a land of sunshine and colour, but most of all it is an island, and everybody is near the sea. What part does the sea play in poetic inspiration?

It is of course a powerful source of inspiration. The people of my country live in constant contact with it, for Mauritius is very small and we get to the sea very easily. Even the most remote beaches are seldom more than 10 km from us. The movement of the waves and the beat and throb of the sea are lively factors in Mauritius poetry. Its influence is very strong and is described in "Mascaret" by Edouard Maunick in the line "Thus among us is the need for living, side by side with the legends of the sea".

Just now you spoke of your own personal development. Have you any further plans for poetical work?

This year I shall be publishing "L'Alter-nance des solstices", a new collection of poetry in the "St-Germain des Prés" series. For a long time, too, I have been preparing two collections of poems in English, which I hope to publish in a single volume. The titles are "Anger blue" and "Whirling Arch". There are some aspects of my temperament which find expression more easily in English than in French. At present I hope to have this work published next year. Apart from this I have projects for short stories and various critical essays on the development of poetry.

I believe, for example, that french poetry could fructify by taking inspiration from the poetry which is being written in various other french-speaking countries, and more particularly in island communities, such as Mauritius. I think, too, that the poetry written in our countries could be enriched by more contact with european poetry. Leopold Senghor said: "Emotion is negro, reason is greek". Senghor's thesis to the black writers of Africa was to steer clear of easy sentimentalism and excessive emotion, recommending them to put more thought

into their poetry. If we take a close look at the attempts presently being made in european poetry, we find it rather arid, dry and sterile, because it is unduly turned in upon itself. It is not sufficiently open to nature and is too often kept away from sensation. I should wish to show that a hybrid form of poetry, giving equal weight to thought and sensation, would have a better chance of survival.

We hope your own poetical works and those of the other poets and writers you have mentioned can be made better known. What do you think is the best approach to this?

This is a very important question, and is close to my heart. We poets of Mauritius are inclined to think we have not had enough help. There are of course the cultural and technical cooperation agreements between developing countries and industrial countries, and we have a number of partner countries also associated with the European Economic Community. Up to the present, however, real cultural exchanges have had no place in these agreements. At present the cultural agreements do not go much further than the award of bursaries and the sending out of professors and other agents of cooperation. Even within the framework of the eur-african Association, there are no real cultural exchanges in operation, whether for music, for the plastic arts or for literature. There can be no true association between these two continents if there is not a constant weaving of a web of cultural connections, if their writers do not meet one another, if the works of our artists are not exhibited in your countries, if there is no promotion of african, malagasy and mauritian culture in the european countries. Our own countries are extremely keen on promoting european culture. You will find the works of european authors in all our libraries and bookshops, and we organise frequent exhibitions by european artists. Up to the present the counterpart work is quite insignificant, almost non-existent. ■

Interview by A. LACROIX

BOOKS

Forschungsinstitut der Friedrich-Ebert-Stiftung — **Afrika-Biographien - African Biographies.** — Verlag Neue Gesellschaft GmbH., Bonn-Bad Godesberg (begun in 1969 and continuously brought up-to-date).

Since 1967 the research Institute of the Friedrich Ebert Foundation has been publishing in German a collection of african biographies in loose-leaf form. Since 1971 there has also been a version in english.

Up to the present the work comprises 700 biographies of leading african personalities, in all sectors of public life, exercising a decisive influence on developments in their respective countries. The fullest possible information is given about members of the governments, political party leaders, the top personnel in associations and firms, civil servants and important army personalities. In other fields the selection seeks to cover all the people about whom knowledge is needed for a satisfactory survey of the governing forces in each country.

The Friedrich Ebert Foundation is consistently seeking to enlarge the range of personalities covered and to keep the information up-to-date. This is materially facilitated by the loose-leaf format.

This collection is a unique undertaking of its kind. It is in general more detailed than the similar biographical compilations which have yet been made in various african countries for local purposes.

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Wolfgang POLLAK. — **Bausteine einer Besseren Welt (Foundations for a better world).** — (Projekte der gewerblichen Berufsausbildung in Entwicklungsländern) Vocational training projects in developing countries. Bundesstelle für Entwicklungshilfe (B.F.E.) 6236 Eschborn/Taunus, Frankfurter Str. 92-98 FRG (1973).

This book gives a short account of vocational training projects which have been carried out in developing countries with the technical assistance of the german Federal Centre for Development Aid (Bundesstelle für Entwicklungshilfe).

In most cases it describes technical training centres, such as specialised training schools, engineering schools, institutes for training technical instructors hotel schools and commercial schools. Some 400 german technicians are now working in nearly 60 projects, the chief aim of which is to help the developing countries to come quickly to the point of standing on their own feet in matters of training, and thus to reduce the gap between industrial countries and the Third World.

In the course of time these training establishments are to become the technical centres of their respective regions, and their function will also include support for small and medium firms. This will happen on account, for example, of their advice on technical organisation and in the passing on of technological knowhow, and also through their economic structure and the importance of aid in carrying out vocational training schemes in the fields concerned.

The practical purpose of Mr. Pollak's book is to provide a general prospectus of the technical training centres set up by the Federal German Government in developing countries for the comparatively small public interested in development problems. The book is at once a work of information and a good document for technical specialists.

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Albert MEISTER. — **Alphabétisation et développement : le rôle de l'alphabétisation fonctionnelle dans le développement économique et la modernisation (Literacy and development — the rôle of functional literacy in economic development and modernisation).** — Editions anthropos - 1973.

The very big campaigns against illiteracy, carried out for some years past under development programmes, do not seem to have yielded the expected results. A new method is now being tried, linking the acquisition of literacy with economic development and the vocational training programmes. The degree of literacy by itself is not a good indicator

of the complex process of passing from one cultural condition to another, but it is an essential condition of the process. The literate person is not merely one who has mastered the three ,R's, but a person moving in a different universe, in the world of the poster, of new tools, of the transistor, of modern transport facilities and the rest. This opening into the modern world seems to be the most important effect of learning to read and write, though it is perhaps less measurable in economic terms than in terms of integration and social change.

The first part of the work contains an analysis of the functionality concept, constituted by the link between literacy and the development programme, and it passes on to a summary description of the projects contained in the UNESCO experimental programme. The second part studies the actual condition in which these projects operate. The type analysis, of which the third part consists, is followed by conclusions which bring out the correlation between functional literacy and economic growth.

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Michel NDOH. — **Guide politique des États africains. (Political guide to the african countries).** — Editions Maspero, Paris 1973.

This survey is a kind of aide-mémoire on the politically independent countries of Africa. The 41 countries are shown in alphabetical order and the particulars for each include figures for area and population, the name of the capital city and particulars of the political régime. The part of Africa not included in the work comprises the territories which are still dependent and the states of Southern Africa. Care has been taken to present the particulars for the 41 countries objectively, and without exaggeration or complacency. The extremely matter-of-fact character of the format excludes commentary.

The aim of this compilation is to help as many Africans and non-Africans as possible to know the continent better.

BOOKS

Régine VAN CHI-BONNARDEL. — **Grand atlas du continent africain. (Atlas of the african continent)** with prefaces by Amadou Mahtar M'Bow and Théodore Monod. — Editions Jeune Afrique, 1974.

Astonishing as it may seem, there has not previously been an atlas of the african continent of more recent date than 20 years ago. The 20 years in question have been an eventful period in the great transformations of Africa, and this atlas aims to give an account of them.

It is not only a series of maps brought up-to-date and put together. Apart from the geography proper, the general characteristics of the african continent are duly set out, including the human and economic aspects of each country. The information to be found in this atlas is not recapitulated in this form elsewhere.

Cooperating in this work have been a team of geographers, selected and directed by the author, who is a lecturer in history and geography and professor of tropical geography in the universities of Paris VII and Lille. There were some 20 cartographers and draftsmen, several economists and the research and documentation service of "Jeune Afrique". They had the support and advice of international organisations, such as UNESCO, the Economic Commission for Africa, and cooperation from the Paris Institut Géographique National. The atlas is now available in French and English, and editions in other languages will appear later.

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René BAUCHAR. — **L'Afrique noire et l'Océan indien francophones aujourd'hui. (Black Africa and the french-speaking countries of the Indian Ocean today).** — Jeune Afrique, 1973.

For the tourist Africa used to be a dream and it is now a definite destination. The holiday-makers' Africa indeed exists, even though it is far from comprising the whole of Africa, and sometimes tends to conceal the real Africa which is less of a paradise than might be thought from this book.

Nevertheless, René Bauchar's book is a useful description of 24 French-speaking countries in Black Africa and the Indian Ocean, and whets the reader's enthusiasm to go there. It first gives an account of the people, the country and scenery and the animal life, then includes special articles on each country. There is also useful practical information on how to travel and suggested circuits and itineraries, including 27 route-maps and notes on reception and visiting facilities, formalities and the chief hotels. The work is well presented and magnificently illustrated with 216 colour photographs by Michel Huet.

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Max KOHNSTAMM and Wolfgang HAGER. — **L'Europe avec un grand E. (Europe with a capital E.)** — Editions Robert Laffont, 1973.

This book might have been called "the european dossier". A survey, which includes an account of the prospects ahead, is compiled under the direction of Max Kohnstamm and Wolfgang Hager. Each of the big european problems is dealt with by one of the world's leading specialists, covering, for example, european agriculture, money, security, relations between the E.E.C. and the United States, East-West relations and those of the Community with the Mediterranean countries.

The chapter entitled "the Community and developing countries" was written by Henri Perroy, professor of international economic science in the Catholic university of Paris and author of the book

"L'Europe devant le Tiers monde". (1969). He notes at the outset that "the enlarged Community will be a matter of great weight for the development of the Third World. A third of the exports from developing countries is bought by the enlarged Community and less than a fifth by the United States". He then discusses the best ways of promoting development, raising questions about aid, about the trade which supplies four-fifths of the external resources of developing countries, about the present errors and omissions, the generalised preferences scheme, suggesting a number of possible improvements.

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David JONES. — **"Europe's Chosen Few". Policy and practice of the E.E.C. aid programme.** — Overseas Development Institute, 1973.

The Overseas Development Institute (Britain) turned its attention recently to the E.E.C.'s aid programme. Researcher David Jones has produced an admirably concise study of the "policy and practice" of the E.D.F., dealing with the larger issues as well as precise points without tendentiousness.

There is no simple answer to why the E.E.C. is interested in Association, Jones writes. He grasps the nettle with a critical look at the E.E.C.'s declared intentions and sympathy for the staff involved. As the title of the study hints, Jones sees limited association as defeating its own ends in the long run.

While ticking off more points against than for the E.D.F., Jones nonetheless concludes: "Generally, the advantages to the Associates in the aid field outweigh the disadvantages. It is better to have association aid than not to have it, and it is better to have a given value of E.D.F. aid than an equivalent gross amount from most of the bilateral donors."

"Europe's Chosen Few" explains the machinery of E.E.C. aid with great clarity, poses the important questions and comes in time to be of particular service to the associable countries negotiating in Brussels.

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