

Cabora Bassa and the Future of Mozambique

There is growing international concern that the future of the Portuguese-controlled Territory of Mozambique may to a large extent depend on the outcome of the proposed Cabora Bassa Dam project—the fifth largest of its kind in the world—planned for construction on the Zambezi River in Mozambique.

At the center of the project is an agreement under which Mozambique will provide South Africa with a new source of hydro-electric power. Concern also arises from the fact that the Portuguese plans for the Zambezi Valley envisage the development for settlement and other purposes of an area of 140,000 kilometers—about one tenth of the total Territory—and the eventual settlement of large numbers of Europeans.

More serious, however, is the size of the foreign investment involved, which some view as committing the countries concerned to supporting Portugal's colonial policy.

A recent article on the Cabora Bassa project in the Christian Science Monitor put it this way: "Its success could entrench white rule in Portugal's East African Territory for the foreseeable future. Its failure would almost certainly signal the eventual victory of African nationalists over the Western world's last colonial State."

The following details concerning the Cabora Bassa project were drawn from a recent report submitted to the United Nations Committee on Decolonization. The report is entitled: Report of the Special Committee on the Situation with regard to the Implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples (Doc. A/8148/Add.1).

As officially defined, the Cabora Bassa project comprises three parts:

The conservation dam and works to be erected on the Zambezi River in Tete District in Mozambique.

The hydro-electric power station and the ancillary works for the generator; and

Supply of electricity; and the transmission system to deliver power from Cabora Bassa to the Apollo Distribution Station at Irene, outside Pretoria in South Africa.

The dam is to be constructed in the Kebrabasa gorge on the Zambezi River, about 130 kilometres up-stream from the town of Tete and 500 kilometres from the mouth of the river. While the main purpose of the dam is to create the necessary water pressure for the hydro-electric power plant, it will also serve to regulate the flow of the Zambezi River and to provide the means of irrigating large areas of land.

Specifications for the dam call for a wall which will be about 550 feet high and almost 1,000 feet long. The dam, which will create a lake 15 miles at the broadest point and stretching back some 150 miles to Zumbo on the Zambian border, will have a storage capacity of 65,000 million cubic metres. It will be the third largest in the world, twice the size of the Kariba Dam and 70 per cent larger than the Aswan Dam. When the hydro-electric power plant is completed, it will have a generating capacity of 4,000 megawatts, or 17,000 million kilowatt hours a year.

The project is to be developed in four stages:

—erection of the main dam wall and the installation of three 400-megawatt generators in the southern power station at Cabora Bassa by 1974, and the erection of two transmission lines from Mozambique to the Apollo sub-station in South Africa;

—an additional converting plant and a fourth 400-megawatt generator, scheduled for completion in 1977;

—a further converting plant and a fifth generator in 1979, which will complete the southern power station; and

—construction of the northern power station.

Since the early 1950s, the hydro-electric mineral and agricultural potential of the Zambezi Valley has been under study by the Portuguese Government. As previously reported work on the Cabora Bassa dam had at one time been expected to begin under the Transitional Development Plan for 1965-1967.

In 1966, the Portuguese Government allocated 20 million escudos for further studies on the proposed dam. However, since it was clear that for many years to come Mozambique would not be able to use all the power that would be generated, the Portuguese Government decided to proceed with the construction of the dam only after it had secured the agreement of the Electricity Supply Commission of South Africa (ESCOM) to guarantee the purchase of 1,000 megawatts a year from 1974, and increasing thereafter to 1,700 megawatts a year by 1980.

Agreement with South Africa

The supply contract between Portugal and ESCOM is an integral part of the agreement between the Government of Portugal and the Republic of South Africa on the Cabora Bassa project. Apart from the reported amount of power which ESCOM will purchase, no details of the supply contract are available so far. Although the capital costs per kilowatt installed at Cabora Bassa are reported to compare very favourably with those at the Owen Falls, Kariba or Volta Dams, it is believed that ESCOM has agreed to purchase power from Mozambique at a slightly higher price than from South Africa's own newer carbo-electric plants.

Under the terms of the agreement, the Portuguese Government will itself, or by means of a special authority established

for the purpose, undertake the construction, operation and maintenance of the Cabora Bassa project, "generally in accordance with the technical specifications and financial arrangements set out in the final contract with the consortium selected in pursuance of the discussions and consultations which have taken place between the two Governments". The portion of the transmission line within South African territory and the equipment at the Apollo sub-station are to be constructed by the same consortium under contract with ESCOM (which is reported to amount to R47 million or \$65.8 million).

The Portuguese Government is to ensure the supply of power, while the Government of South Africa is to ensure that ESCOM will carry out the terms of the supply contract and it will provide such assistance as may be necessary "to enable ESCOM to do so". South Africa also agrees to lend Portugal a total of 35 million rands (\$49 million) to cover deficits during the first four years starting from the time when stage one is brought into operation, limited, however, to a maximum of R13 million (\$18.2 million) in any given year.

Portuguese Contract for Construction and Financing

Towards the end of 1967, the Government of Portugal invited international bids for the construction and financing of the Mozambique portion of the Cabora Bassa project. Three international groups submitted bids, and, in July 1968, the South African-led Consórcio Hidroeléctrico do Zambeze (ZAMCO) was provisionally awarded the contract for the first stage of the construction. During the early part of 1969, there were reports that the Portuguese Government had reopened negotiations with the other two consortia as it had not been satisfied with the financial arrangements offered by ZAMCO. However, in September 1969, the final contract was awarded to a reorganized ZAMCO, known in Portuguese as Zamco-Zambeze Consórcio Hidroeléctrico, Lda.

As originally established ZAMCO comprised five companies with their headquarters in the Federal Republic of Germany, three in France, one in Sweden and three in South Africa. During 1969, the Swedish firm, Allmänna Svenska Elektriska Aktiebolaget (ASEA), withdrew its participation in the project. The consortium, which was awarded the contract last year, includes eight new companies, of which six are French, one is Italian and one is Portuguese. The member companies of the consortium named in the contract and their headquarters are as follows:

1. Allgemeine Elektrizitäts-Gesellschaft AEG-Telefunken, Frankfurt, Federal Republic of Germany.
2. Brown Boveri and Cie, Mannheim and Augusta, Federal Republic of Germany.
3. Compagnie Générale d'Entreprises Electriques (CGEE-Cogelx), Levallois-Perret, France.
4. Entreprise Fougeroll-Limousin, Paris, France.
5. Hochtief Aktiengesellschaft, Essen, Federal Republic of Germany.
6. J. M. Voith GmbH, Heidenheim Brenz, Federal Republic of Germany.
7. L. T. A., Ltd., Johannesburg, South Africa.
8. Siemens Aktiengesellschaft, Erlanger, Federal Republic of Germany.
9. Shaft Sinkers (Proprietary) Ltd., Johannesburg, South Africa.
10. Sociedades Reunidas de Fabricações Metálicas-Sorefame, S. A. R. L., Amadora, Portugal.
11. Società Anonima Elettrificazione, S. p. A., Milan, Italy.
12. Société Générale de Constructions Electriques et

Mécaniques Alstom, Paris, France.

13. Compagnie de Constructions Internationales, Paris France.
14. Société des Grands Travaux de Marseille, Paris, France.
15. Société Générale d'Entreprises, Paris, France.
16. Société Française d'Entreprises de Dragages et de Travaux Publics, Paris, France.
17. Compagnie Industrielle de Travaux, Paris, France.
18. Entreprises Campenon-Bernard, Paris, France.

Italian Withdrawal Reported

Early in 1970, Italy was reported to have decided to withdraw its participation in the Cabora Bassa project. There is no information yet on the outcome of this decision and any subsequent modifications in the original contract. Following is a summary of the contract as signed in September 1969 including reference to Italian participation as originally intended.

The contract awarded to ZAMCO is for the first three stages of work and includes the actual dam construction, the completion of the southern power station and the transmission system from Cabora Bassa to the border of South Africa. It also includes the necessary preliminary and ancillary works, such as the installation of power connexions to the Cabora Bassa site, construction of access roads and the new township for housing the work force.

This contract for work in Mozambique amounts to 8,787.33 million escudos (approximately \$300 million) of which 3,187.76 million escudos is for civil construction and 5,599.57 million escudos is for equipment. Payments for the equipment (which are apparently to be financed mainly by export credits from the countries concerned) are to be made in the national currencies of the participating companies.

The various companies responsible for supplying the hydro-electric and related equipment are designated in the contract as shown below.

<i>Equipment</i>	<i>Suppliers</i>
Turbines	Alstom-Neyrpic, and Voith
Speed governors	Alstom-Neyrpic, or Voith
Excitation systems	Brown Boveri and Cie and/or Siemens
Main generators	Alstom, BBC and Siemens
Step-up transformers for the main generators	CGE and AEG, or BBC, or Siemens
Converter group transformers	CGE and AEG, or BBC, or Siemens
Voltage regulators	To be announced within 30 days after the signing of the contract
Mercury vapour rectifiers	To be awarded before the signing of the contract
"Tiristores"	AEG, BBC, Siemens
Compensating and smoothing condensers	Siemens

Contract Implementation and Related Works

Financing

Details of the financing arrangements are set out in an annex to the contract, the text of which is not yet available. From press reports, however, it appears that the main part of the Mozambique contract will be jointly financed by means of export credits from the participating Governments: France and the Federal Republic of Germany, 20 per cent each; Italy, 13 per cent; loans from private Portuguese banks, 8



It is against the planned removal of some 25,000 Africans from the Cabora Bassa Dam area, the "regrouping" of the African population in the Territory and the eventual

settlement of a large number of Europeans that the Front for the Liberation of Mozambique, (FRELIMO) is opposing the project. Freedom fighters are shown in training.

per cent; and the balance to be provided from other private loans and by the Portuguese Government, which will also guarantee the outstanding debt.

The South African Industrial Development Corporation was reported to have approved an export credit of R20 million (\$28 million) to Portugal in December 1969 for certain aspects of the Cabora Bassa contract. The credit is at a 6 per cent interest rate and repayable in twenty-seven equal half-yearly instalments, starting 1 April 1970. The sum covers portions of the work being carried out by the South African participants in ZAMCO.

According to press reports in April 1970, the Portuguese Government issued a decree setting out the conditions relating to the loan to be provided by the Kreditanstalt für Wiederaufbau of the Federal Republic of Germany. The details of the loan are not yet available. It may be noted that the contract between the Portuguese Government and ZAMCO provides that, among other conditions, the contract may be abrogated if the export credits envisaged are not approved or if the agreements with the South African Industrial Development Corporation or the Kreditanstalt für Wiederaufbau are not concluded.

The newly established Sociedade Financiera Portuguesa, S. A. R. L. (Portuguese Finance Corporation) is expected to play a role in the financing of the project. According to one report, among other functions, the Sociedade which has an authorized capital of 1,000 million escudos, will act as the paying agent for ZAMCO. It may also raise money on the international market to lend to the companies or government agencies which need it.

Zambezi Development Office

Early in 1970, the Portuguese Government created the Gabinete do Plano do Zambeze (Zambezi Development Office) for the supervision of the Cabora Bassa project and the general planning of the Zambezi Valley development scheme.

As reported in the press, the first priority of the newly created Office will be the supervision of the Cabora Bassa scheme until its completion. Subsequently, it will be respon-

sible for ensuring the supply of electricity to South Africa according to the agreement between the two countries.

At the same time, the Office will be responsible for stepping up work on the studies and preliminary work for the Zambezi Valley master plan, of which the Cabora Bassa dam is considered to be only the starting point. The Office will also have responsibility for securing the support of private enterprise and for helping to form companies and corporations to exploit the Zambezi Valley resources.

Native Resettlement

As reported earlier, the plans for the Cabora Bassa dam require the removal of some 25,000 Africans from the area which will eventually be inundated. The original Missão de Estudo, Fomento e Colonização do Zambese, established in 1968 to work out plans for resettling the population, has now been integrated as a division of the newly created Zambezi Development Office mentioned above.

According to a Portuguese source, as part of the resettlement plan, the authorities first mounted a "social campaign" to explain the plans to the people and reasons for their resettlement. The resettlement of this group is being planned within the broader context of the *reordenamento* (regrouping) of the African population in the Territory, and will involve the establishment of new villages and the provision of health, education and other services.

New Township

A new township is to be established on the Songo plateau near the dam site in the recently created Cabora Bassa administrative post to house the families of some 4,000 technical and other personnel who will be engaged in the construction of the dam. ZAMCO which, under the contract with the Portuguese Government, is responsible for the housing of the staff, the access roads, etc., has already awarded a 31.4-million escudo contract to Fabrica Bom Sucesso for the construction of prefabricated houses for the European workers.

Other Related Works

Other work to be carried out either by ZAMCO or by the Por-

tuguese Government in connexion with the Cabora Bassa project include feeder roads, bridges, clearing of land for transmission lines and the establishment of telecommunications links with the dam site. A number of the contracts have already been awarded. These include a 15-million escudo contract with Krueger for the construction of the water supply system for the new township. The ownership of Krueger is unknown, but it is reported that some of the equipment is to be built and assembled in Mozambique.

ZAMCO is also reported to be working on the specifications of a major bush-clearing contract on the 800-kilometre route of the power lines to South Africa. The 70-metre lanes for inspection and protection will be cleared on both sides of the power line.

Security Measures

The Portuguese authorities are reported to have established strict security measures near the dam. All the area surrounding the site is said to be carefully guarded, and anyone entering the area must show the proper identification. The newly created Cabora Bassa administrative post has already been assigned an 18-man police detachment.

In 1969, there were reports that two South African battalions were helping to defend the Cabora Bassa dam. Although those reports were officially denied, an article in *Africasia* in February 1970 specified the locations of the South African troops in Tete. According to this source, South Africa has sent one battalion of its élite troops to Chioco and several companies to Chicooa, Magué and Zumbo which are located along the part of the Zambezi River where the dam is being built.

Other Participation

Work on the Cabora Bassa project is expected to involve a large number of other firms not part of the ZAMCO consortium. For instance, the Compagnie des Chantiers Internationaux of France is expected to be responsible for much of the civil construction work of the dam, and the Compagnie des Constructions Internationales will be associated with Entreprise Fougerolle in the building of the generating station.

There are reports that Barclays Bank D. C. O. will be involved in the financing of the Cabora Bassa project through its wholly owned subsidiary in South Africa. According to one report, Barclays Bank D.C.O. in South Africa has two directors in common and is closely linked with the Anglo-American Corporation. There are no details of what financial assistance Barclays will provide, if any. The policy of the United Kingdom Government regarding British participation in the Cabora Bassa project was explained in a statement by the Minister of State for Foreign and Commonwealth Affairs on 15 December 1969 in the House of Lords. On that occasion he said the following:

"... it is not Her Majesty's Government's policy to discourage or prevent British companies from engaging in legitimate trade or dealings in Mozambique. There is nothing in our sanctions legislation which makes it an offence to supply goods from this country to Mozambique unless the supplier knows, or has reasonable cause to believe, that they will be supplied or delivered to, or to the order of, a person in Southern Rhodesia or that they will be used for the purpose of any business carried out or operated from Southern Rhodesia. In short, the mere supply of equip-

ment to Mozambique does not fall within the ambit of our sanctions legislation. Similarly, there is nothing in our sanctions legislation which makes it an offence for a British bank, or the South African branch of a British bank, to finance the operation of [a] South African company constructing a dam and power project in Mozambique."

Supplies from Southern Rhodesia

According to a booklet prepared by the National Export Council of Southern Rhodesia, that Territory expects to participate in the provision of various supplies needed in connexion with the project. The value of the trade is expected to amount to £125 million over five years. In the long term, Southern Rhodesia also stands to benefit from the new source of electrical power and a new outlet to the sea through a series of locks by-passing the dam.

INTERNATIONAL IMPLICATIONS

As mentioned earlier in this article, there is growing international concern over the project and its possible effect on the future of Mozambique. In adopting an omnibus resolution on the Portuguese Territories in December 1970, the UN General Assembly welcomed the action taken by financial groups in certain States to withdraw their participation in the project, "but requests the Governments which have not yet done so to withdraw from the activities relating to the Cabora Bassa project in Mozambique..."

Opposition has also come from other sources. In March 1970 the Ministerial Council of the Organization of African Unity adopted a resolution condemning the project.

In May, following the withdrawal of Italy from the project, President Kaunda of Zambia was reported to have urged the ambassador of the Federal Republic of Germany and France to advise their Governments to urge the companies involved to follow the example of the Swedish, British and Italian firms which had already withdrawn. [The British GEC-English Electric had at one time intended to replace the Swedish ASEA in the ZAMCO consortium but subsequently decided not to participate.]

Since then, the French Secretary of State for Information, Mr. Leo Hamon, is reported to have said, after the visit of the French Foreign Minister M. M. Shumann to Lisbon, that France would definitely participate in the Cabora Bassa project, which was "essentially of benefit to the Africans".

FRELIMO'S (Front for the Liberation of Mozambique) opposition to the project is already well known. It considers the Cabora Bassa as a comprehensive economic and political scheme to ensure white domination and colonialist rule in southern Africa and the involvement of foreign capital in Cabora Bassa and any other scheme in the Territory as a hostile act against the people of Mozambique. It has also announced its determination to disrupt the construction.

Recently, a new move was made to co-ordinate opposition to the dam. In March 1970, a number of organizations joined to form the Dambusters Mobilizing Committee in London. Member organizations in the Dambusters include the Anti-Apartheid Movement, the Liberation Committees of Angola, Mozambique and Guinea (Bissau) and the Movement for the Liberation of Angola. The Dambusters intend to prevent the participation of any British financial interests in the Cabora Bassa project.