COMMISSION OF THE EUROPEAN COMMUNITIES
Information Directorate-General

B-1049 BRUSSELS
Rue de la Loi 200
Tel. 735 00 40

Subscription: ext. 5120
Inquiries: ext. 2590
Telex COMEURBRU 21877

INFORMATION — COOPERATION-DEVELOPMENT

INTERNATIONAL COOPERATION AT WORK: THE KPONG DAM IN GHANA

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"International cooperation" can be more than just a slogan sometimes: it does produce concrete results. An example of international cooperation at work can be seen in the Kpong dam project in Ghana, a vast hydro-electric scheme with financial backing from a wide range of sources.

The European Community has decided to make two loans available for the work at Kpong. The first, a loan of 8.98 million units of account (u.a.) on special terms, is from the European Development Fund (EDF), the EEC body which handles finance for projects in the African, Caribbean and Pacific States (ACP). The second loan, of 10 million u.a., is from the European Investment Bank (EIB).

Five further loans are being provided by the Kuwaiti Fund, the Saudi Fund, the Arab Bank for Economic Development in Africa (ABEDIA), the International Bank for Reconstruction and Development (IBRD) and Canada.

When added to the contribution put up by the beneficiary body itself, this cooperation will make it possible to reach the total of 213.09 million u.a. needed for this scheme, one of the main results of which will be to reduce Ghana's soaring oil bill.

Five-part project

The project will be carried out between 1977 and 1980 and comprises five parts:

1. construction of a dam and reservoir on the Volta at Kpong, approximately 24 km downstream from the existing dam at Akosombo;

2. construction of a hydro-electric power station incorporated in the dam;

3. erection of a 60 km high-tension line linking the power station to the Tema sub-station;

4. installation of two condensers, at Prestea and Kumasi; upgrading of the Tema-Achimota line and 80 km of line in the Sefwi-Wiawso-Bibiani region;

5. resettlement of the displaced population.

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The hydro-electric potential of the lower part of the Volta basin was discovered as early as 1925; hence the construction of the Akosombo dam in 1966.

Studies carried out in 1959 and 1971 then paved the way for the Kpong scheme, and in 1975 a number of analyses confirmed the wisdom of this investment. In 1976, Canada financed the invitation to tender dossiers. The goal here is to produce electricity economically, from a power plant with an installed capacity of 160 MW. By 1981 the energy produced by the Akosombo hydro-electric station will no longer meet Ghana's needs. The 792 MW now available will be unable to cope with a level of consumption which, even after increasing by 6.5% annually between 1968 and 1975, will still be increasing at an annual rate of 5.2% between 1976 and 1986. An additional - and major - consideration is that the scheme will make it possible to improve the irrigated crops in the region.

In 1976 power consumption reached 598 MW, leaving a surplus capacity of 194 MW. The forecast consumption for 1978 is 733 MW, which reduces the surplus to 59 MW and in 1981, consumption will reach 828 MW; that means a deficit of 36 MW.

This shows that from 1981 the extra capacity (a guaranteed 140 MW) provided by the new hydro-electric station will be essential. The figures also show, however, that by 1985 yet another installation will be needed. Once again, perhaps, international cooperation will be needed.

A substitute for oil

The Kpong dam scheme fits in perfectly with the Ghanaian Government's development policy, which is designed to increase production of the country's main resources: cocoa (of which Ghana is the world's largest producer), wood, manganese, gold - and electricity. Importance is also attached, however, to diversification of the national economy, which is still too narrowly based on a single product: cocoa, which accounts for 60% of Ghana's exports and 30% of public revenue.

But fulfilment of these objectives suffered a setback in 1974, when the full effects of the oil price increases began to make themselves felt. One hundred million dollars were added to the bill for imports of crude alone. The result was a serious balance of payments crisis and a sharp drop in the reserves.

In this situation the importance of additional hydro-electric power capacity is self-evident. But finding a substitute for oil can be costly; hence the need for the international community to cooperate in raising the necessary investment resources.

Ghana with its water resources uses mainly hydro-electric power. Consumption is largely centred in the south of the country, where two-thirds of the population and the bulk of commercial, agricultural, industrial (notably the Volta Aluminium Corporation) and mining activity are concentrated. Two bodies are responsible for electricity distribution: the Volta River Authority (VRA) and the Electricity Corporation of Ghana (ECG).

The VRA supplies power to the mining industry (gold, diamonds, manganese and bauxite are extracted), to the VALCO, the ECG, the Akosombo district, and to Togo and Benin. It was set up in 1961 for the construction of the Akosombo dam, but is also active in other fields, taking responsibility, for example, for research and development work connected with Lake Volta (public health, agriculture and fisheries). The VRA is managed and staffed wholly by Ghanaians.

The ECG supplies electricity to the rest of Ghana's consumers.

The construction and management of the Kpong hydro-electric dam is being undertaken by the VRA, which is able to take all the necessary steps on its own initiative; it has been operating for about ten years now, with consistent efficiency.

The new dam is to be 700 m long and 20 m high and will flood a total area of 3 650 ha. The power station to be located on the western part of the dam will be 150 m long, and is to have four turbines and an installed capacity of 160 MW. Apart from the dam and power station and the development of the necessary supply network, new dwellings will have to be built for the 5 500 people now living in the area to be flooded, at an estimated cost of 5 million u.a. Some agricultural land will also be submerged: 170 ha of cotton, 90 ha of rice and 400 ha of sugar cane; on the other hand, up to 6 000 ha will come under irrigation for the first time.

The health and hygiene element of the scheme is also considerable. To counter the risk of spreading waterborne diseases, a number of measures (e.g. improvements in the drinking water supply) will be necessary. It seems certain, however, that the dam will play a part in the fight against onchocercosis.

A new form of financing

The dual purpose of the Kpong scheme, then, is to provide Ghana with the electricity needed to diversify production while mitigating the effects of the oil price rises.

But a project on this massive scale requires a considerable capital outlay: in this case, 213.09 million u.a. Of this, 96.4 million u.a. will be spent on civil engineering, 21.6 million u.a. on project study and supervision, and 34.6 million u.a. on the turbo-generator sets and overhead travelling crane.

An investment of this size clearly called for a new type of financing; the final arrangements were worked out at a meeting held in Paris in May 1976. Seven bodies, including the EDF and the EIB, agreed to make loans available to the Volta River Authority, which itself decided to contribute 58.75 million u.a.

Forward financing plan

Source	Amount in million u.a.	Remarks
Volta River Authority	58.75	
Kuwaiti Fund for Arab Economic Development	27.40	20 years at 6% 5-year grace period
Saudi Development Fund	29.20	20 years at 6% 5-year grace period
Arab Bank for Economic Development in Africa	8.97	17 years at 6.5% 5-year grace period
Canadian International Development Agency	34.76	50 years at 0% 10-year grace period
International Bank for Reconstruction and Development	35.03	20 years at 8.75% 4½-year grace period
European Investment Bank	10	15 years at 6% 4½-year grace period
European Development Fund	8.98	40 years at 1% 10-year grace period
TOTAL	213.09	

To improve coordination of their contributions these sources have formed two genuine cofinancing groups (see annex):

- the Kuwaiti Fund, the Saudi Fund and the ABEDIA for the civil engineering work on the dam and power station;

- the EDF, the EIB and the IBRD (part only) for the electrical and mechanical equipment.

PROJECTS BEING CARRIED OUT WITH JOINT PARTICIPATION

PROJECT	COUNTRY	ARAB AGENCIES	FINANCING					TOTAL COST
			EDF	EIB	COMMUNITY TOTAL EDF + EIB	ARAB AGENCY CONTRIBUTION	OTHER	
EXTENSION OF THE PORT OF DOUALA	CAMEROON	ABEDIA	4,2	-	4,2	8,4	82,00	94,60
CONGO-OCEAN RAILWAY	CONGO	KFAED ABEDIA SDF	14,9	-	14,9	36,9	75,2	127,00
CIMAO clinker plant Regional project	TOGO IVORY COAST GHANA	ABEDIA	18,00	25,95	43,95	8,80	219,20	271,95
KPONG DAM	GHANA	SDF KFAED ABEDIA	9,00	10,00	19,00	65,60	138,50	223,10
SELINGUE DAM	MALI	ADFAED SDF QF KFAED	19,20	-	19,20	55,00	51,00	125,20
GOLWEIN-GELIB ROAD	SOMALIA	ADFAED	19,60	-	19,60	17,60	-	37,20
SONGLOULOU DAM	CAMEROON	KFAED	-	13,5	13,5	46,00	134,30	193,80
			84,90	49,45	134,35	238,30	700,20	1.972,85

Key: ABEDIA: Arab Bank for Economic Development in Africa
SDF : Saudi Development Fund
KFAED : Kuwaiti Fund for Arab Economic Development
ADFAED: Abu Dhabi Fund for Arab Economic Development
QF : Qatar Development Fund
ADF: Arab Development Fund
EDF: European Development Fund