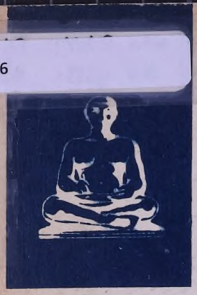


special issue

The Scribe

THE ARAB REVIEW

5th Year — Vol. VIII

No. 4 — May 1964

Monthly magazine published in French, English, German, Italian and Spanish

ASWAN,
spring-board of a new surge in the U.A.R.

U.A.R.

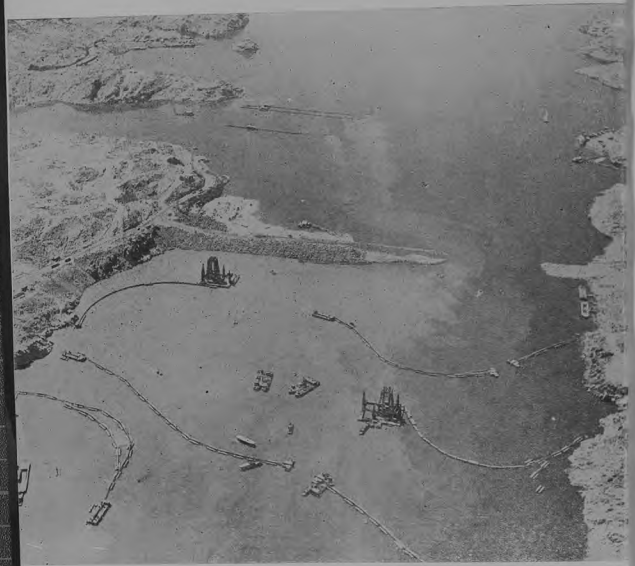
Egypt

Son et Lumière

THE HIGH DAM

at
Zero
hour

THE SOARING GIANT



The first bird's-eye view of the site of the awe-inspiring HIGH DAM, which is now rising higher and higher over the Great River. When completed, this mammoth Dam will grant fertility to the vast expanses of desert land of Egypt, and prosperity to its twenty-seven million inhabitants.

The Scribe
THE ARAB REVIEW

Monthly magazine published in French, English, German, Italian and Spanish
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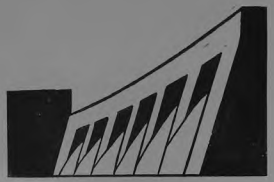


«I am convinced that this people who built the Pyramids in which to preserve, for centuries on end, the effects of their dead, are capable of erecting similar monuments to guarantee the future of their children.

«The construction of the High Dam, which bears witness to the will of a nation and the determination of a people, marks our total victory over imperialism and exploitation. It constitutes a new aspect of our evolution... ».

Gamal Abdel Nasser.

(January 1, 1963, at Aswan)

A Letter from THE EDITOR

It is not without a feeling of pride and satisfaction, devoid of all bitterness, that the people of the United Arab Republic will observe next Friday, May 15, the festivities marking the completion of the first stage of the constructional work on the High Dam, dubbed rightly by someone « The great wall against hunger. »

« THE SCRIBE » feels it is its duty, therefore, to take part in this historic event which estabishes the complete victory of a people long subjugated under the colonial yoke, who succeeded in ridding themselves of it, by force of will and perseverance, and who have overcome obstacles that were almost insuperable.

In retracing the thrilling history of the High Dam, with its many complications and the clashes with different countries, going even as far as the launching of armed aggression, we merely aim at presenting with serenity and objectiveness the stages through which this project has gone, from the moment of its conception in the mind of some engineer, until the completion of this first stage.

So it was that we were induced to present the political aspect of the problem in the international conjuncture of the moment.

The High Dam, besides, has necessitated the restatement of an important substructure to the scale of this gigantic work, because the town of Aswan, which was nothing but a small market-town, more or less important, was not in a position to offer all the services of housing, roads, railways, social services, telecommunications, etc., required for the erection of this monolith.

In presenting to our readers the various aspects of this piece of work, unique of its kind, we cannot indeed forget those who have helped us accomplish it, nor can we forget the principal national organism which contributed with their technical and human skills to its realisation.

And since, as we have mentioned, this project provoked a good deal of passion and caused a lot of ink to flow, and always having regard for objectivity, we publish here the most representative opinions of those who were for and against the High Dam.

Moreover, as it is clearly understood that a job of this magnitude could not be done without upsetting the whole economy of the region in which it is being carried out, we have devoted an article to the study of all its repercussions in the industrial, demographic and economic fields, without forgetting to mention the Nubian population who have been obliged to emigrate from a land which they occupied for thousands of years and who are now already settled in a new « Nubia » situated a few hundred kilometres down-stream. The risk of losing forever a cultural heritage that belongs to the entire humanity should also be grappled with.

To complete this picture, inevitably succinct and incomplete, we had, in a way, to try to find to what extent this project « influenced » the popular masses and the artists of all branches.

We trust we have offered a useful piece of work and we apologise, here and now, to our readers for any omission which might unintentionally have eluded our presentation.

Adel Anis

The High Dam on the International Chess-Board

The people of the United Arab Republic this month live one of the greatest days in their history, when the completion of the first stage of the High Dam will be celebrated all over the country amid tumultous manifestations of pride and dignity, thus marking the completion of nearly four and a half years of hard work and unflattering resolution.

Once more, President Nasser has kept his promise to the Egyptians and set the wheel of prosperity in motion, in spite of the innumerable difficulties and obstacles he encountered to realise this dream for the twenty seven million Egyptians surviving on the waters of the River Nile, and for many generations to come.

We shall not attempt here to retrace the history of this outsize project; so much has already been written about it. Nor is it our intention to take to task those who promised to help us build this vital dam and let us down because we refused conditional help. Had we accepted, the UAR would not have been the UAR of today.

The present occasion, however, is unavoidably reminiscent of our disappointment five years ago.

Our valued readers, especially those in the West, have no doubt read in their local press a good deal of comment on the world implications of the High Dam project; some writers said it was «a mere grandiose whim of Nasser», while others, like General Glubb Pasha, the ousted British officer who commanded the Arab Army of Jordan until 1956, claimed that «Nasser hoped to win public acclaim through the Aswan High Dam». Others went so far as to justify the refusal by the West to help Egypt build the High Dam, by claiming that we had been «playing off East against West».

We feel, therefore, it is our duty to try and present to our readers the full circumstances, hitherto unknown perhaps, under which we have been able to implement this project.

The story of this hydro-electric project is a dramatic one. The scheme itself is not a new one. For more than 30 years before the Egyptian Revolution, government after government had discussed the plan. Some machinery was even purchased by the old regime to begin work on the project; but when the Revolution was staged its leaders found the machinery still in crates. The delay was easy to understand. Always one politician or another would see in the project an opportunity to make a tidy fortune in influence trafficking, in picking up five or ten per cent on the fat contracts to be let. In the end, these ambitious politicians were cancelled out by others who had similar ambitions, and nothing at all was done.

What happened later is related here by Mr. Aly Sabry, former Minister for Presidential Affairs (and the present Prime Minister) who said :

«Seven days after staging the Revolution, while I was in my office at the General Headquarters at Koubbeh Palace, a gentleman whose attire was not very neat and who had a portfolio under his arm, was ushered into my room.

«'I have an important agricultural project,' said the man, 'which will be of great benefit to Egypt. I beg you to let me show it to you, and to kindly give it serious study.'

«I eyed the man suspiciously; his appearance was not normal. He then told me. '...Please do not think I am crazy. Do not be like the other Egyptians and Europeans who thought, when I submitted to them my project, that I was not in sound mind...'

«I took stock of him and I had the impression that indeed he may perhaps not be in full possession of all his mental faculties. But I was patient and listened to him attentively. He told me : '...My name is Daninos. I am Egyptian, of Greek origin, and my profession is agricultural expert. I owned one hundred feddans, which I sold to get money to prepare the project which I am going to show you. I went to Europe frequently to submit it to foreign governments and persuade them to have it implemented. But all my attempts were in vain. I had no success with the Egyptian Ministers of all previous regimes. They accused me of insanity, to such an extent that, to them, I really became insane...'

«My visitor went on : '...Now, everything has changed in Egypt. The Revolution gives me some hope. And this is why I took the liberty of coming to you. I present to you the project and beg you kindly to have it seriously examined. The greatest hope in my life is to see it one day under execution. This will console me for the sacrifices which I have undergone so far...'

«I reassured my visitor and promised that I would take an interest in his project.

«I submitted the project to a number of engineers of the High Command, among whom was (Colonel) Mahmoud Younis of the Engineer Corps (the present Chairman of the Suez Canal Authority). After a quick study of the plans of Mr. Daninos, they declared that the project was realizable.

«And so, the Revolution took the matter up seriously, as you know...»

And indeed, the revolutionary government acted quickly.

Financing the High Dam was, however, a formidable problem. According to our original estimates, the project, including initial power installations, would require at least 180 million pounds, of which 60 million would be in foreign currency. Since we had little prospect of providing the necessary foreign exchange ourselves, vigorous efforts were made to interest Western business concerns.

Meanwhile, the Soviet Union expressed interest in financing the High Dam and, according to the Soviet Ambassador in Cairo in 1955, «Economically, we are in a position to give aid to any country which is willing to accept it.» In the light of this Soviet interest, therefore, the United States, perhaps to counter the Soviet offer, decided to give urgent consideration to our request for financial assistance. Late in that year, the United States and Britain announced that they had offered Egypt an initial grant of 70 million dollars, of which about 56 million was coming from America and 14 million from England. The World Bank too agreed to grant us a loan of 200 million dollars to cover the initial costs of the first stage of this project.

Suddenly, Anglo-American enthusiasm for the High Dam project waned. On July 10, 1956, the U.S. Secretary of State told a press conference, and not the Egyptian Government, that «it had become improbable that Egypt

would be granted the loans». He even deliberately rebuked and criticised the Egyptian economy and its government... Nine days later, he officially informed Egypt of the withdrawal decision...

Why did the West withdraw its loan to us after having previously publicly announced it? Was it because, as the official Western theme claims, we had been «playing off East against West» on this issue? But it will be recalled that Western statesmen had first offered the loans to us knowing, even then, that the Soviet Union wished to help us build this gigantic project. All three sides knew this was a contest. In short, everyone was «playing off» everyone else; and like the Soviet envoys, they knew that the others knew that they knew the others were doing so.

Or, was it as a result of the snowball of antagonism that had been rolling on in the U.S. against Egypt since the Revolution gained momentum? There was no doubt that in America, Congressional opinion turned more and more resolutely against our country and the High Dam. Zionist spokesmen pressed home the story that financial aid for it would only bolster the prestige of the revolutionary government. Southern legislators were somehow given to understand that the increased acreage would be used for greater Egyptian cotton production, which might constitute a strong competition to American cotton...

Or, was it because, as Mr. Dulles declared, neutralism was an immoral and short-sighted conception?

Or, was it that Egypt's recognition of the People's Republic of China was considered by Mr. Dulles as proof of the anti-Western direction of Egypt's policies?

It is true that Egypt had received 40 million dollars in economic aid from the United States. But this was far less than Jefferson Caffery, then American Ambassador in Cairo, had led the Egyptian Government to expect. And, so far, the United States had not come forth with any military aid, to help us defend ourselves against the continued Israeli aggression, with the knowledge of the U.S. particularly after the barbarous attack on peaceful Gaza Sector in March 1955. What was even worse, America still treated Egypt like a semi-independent territory, and not like a sovereign State and a partner, on equal terms. The revolutionary leaders complained that there still was no direct line from Washington to Cairo. The American Government still had a tendency to do business with us through London or Paris.

Whatever aid was offered, it was hedged about with a thousand conditions. Enough strings had to be attached to any aid to restrict our use of it. This was humiliating evidence that the West still considered Egyptians inferior beings, incapable of governing themselves.

Or, were the Western loans for the High Dam refused because we had purchased arms the previous year from the Eastern bloc?

Since 1953, Egypt had been requesting arms from the Western powers to repel Israeli aggression which constituted a threat to our independence and to peace in the Arab world. But there had always been counter-demands, delays, strategic quid pro quo's (like MEDO, the suggested «northern tier» along the Soviet perimeter, bulwarked in the middle East by a defence-in-depth alliance, which had been offered and rejected ever since 1950), and apologies that the necessary balance of arms between Arabs and Israel precluded fulfilment of Egyptian purchasing orders.

On September 21, 1955, Israeli forces invaded and occupied the El-Auja triangle, a demilitarised zone under the 1949 Armistice.

On November 2, Israeli troops attacked Egyptian units across the frontier at Sabha, in another ferocious assault.

The whole question of arms from the West, especially the U.S., forms a bitter chapter in American-Egyptian relations. This problem, more than anything else, convinced Egypt that she could never entrust her security to the West.

The first attempt to get arms from America came late in 1952 — six months after the successful revolution which toppled the corrupt monarchy which was indirectly answerable for the defeat of the Arab Armies in the Palestine War of 1948.

At that time, the Egyptian leader, Gamal Abdel Nasser, sent one of his aides (Wing Comdr.) Aly Sabry, the present Egyptian Prime Minister, as head of a mission to shop for arms in the United States. Sabry was aided in the negotiations by the then Egyptian military attaché in Washington (Brig.-Gen.) Abdel Hamid Ghaleb, at present UAR Ambassador to the Lebanon. There was then no question of an arms gift from America to Egypt. We were prepared to pay cash in dollars. The equipment to be purchased consisted of replacements which would maintain the Egyptian Army at its then existing strength.

Sabry quickly became annoyed at American reluctance to sell even in modest quantities to Egypt. In the end, after much painstaking negotiating, agreement was reached in principle whereby Egypt would purchase ten million dollars worth of military equipment. There was a vague understanding that further purchases could follow.

After nerve-wracking negotiations, and many changes and corrections, agreement was reached on an arms list. Before signing the document, however, an American official suggested that he take the list and prepare a true copy. The one in hand had been altered and corrected so many times it was almost illegible. The final copy was to be ready at 4 p.m. the following day.

The next afternoon, (General) Ghaleb received a telephone call from a friend of his in the State Department. As he recounted the incident :

«Is the list ready? Shall I come for it?» Ghaleb asked.

«We are always glad to see you, anytime you can call on us here,» the American replied. «And we hope we can always maintain the good relations we have enjoyed in the past...»

«But the list, is it ready?» Ghaleb shouted. «Tell me, yes or no?»

«Well, you understand that in all governments there is so much red tape...»

The list was not ready. The deal had been cancelled. Sabry went back to Cairo empty-handed.

A similar scene was repeated each time Nasser sought arms from America. Once it was because America preferred to wait till the Anglo-Egyptian talks on Suez had ended. Another time America insisted on Nasser signing the Mutual Security Agreement, which to Egypt looked like a myriad of conditions, conditions, conditions. To Egypt, it appeared America did not trust her, and this constituted a basic affront to our pride. At the same time, American aid to Israel continued.

In mid-summer, Nasser called in Henry Byroade, then American Ambassador in Cairo, and issued a warning. «Either you get action on my request for arms, or I'll buy them from the Soviet Union.»

Byroade took this warning seriously, but Washington didn't. Washington indeed failed to realise that Gamal Abdel Nasser was a new-style Arab statesman, not an old-school Arab politician to whom turning to the Soviet Union for aid would have hurt him much more than it would have hurt the West.

On July 23, 1955, Dmitri Shepilov, editor-in-chief of «Pravda» was invited to come to Cairo as guest of the Egyptian Government, to attend the third anniversary of the Egyptian Revolution.

A few days later, the bombshell exploded.

Cairo Radio notified its listeners late one afternoon that Nasser was to make an important speech that evening at the Officers' Club. The whole world waited to hear what Nasser had to say:

«...WE HAVE BOUGHT ARMS FROM CZECHOSLOVAKIA FOR COTTON AND RICE...»

This simple phrase was historic. Never before had an Arab leader defied the West so openly on such a grave issue. With this phrase, Nasser proved beyond a shadow of a doubt that he was now completely independent of the West in every possible way. After twenty-five centuries of foreign domination, EGYPT WAS FREE.

The reaction in the Arab world was hysterical. Overnight, Nasser's popularity skyrocketed to heights never achieved by a modern Arab leader. Arab refugees in their camps went wild with joy.

Perhaps more exciting to the Arabs than anything else, however, was the reaction in Washington. Dulles looked panicky. He quickly dispatched his Assistant Secretary of State, George Allen, to Cairo on a breathless mission. The Egyptian press was delighted. «In the old days, Egyptians had to crawl to Washington to beg for favours,» one newspaper commented. «Now Washington has to come crawling to Cairo...» But the die was cast.

The West, in retaliation, launched a campaign of scepticism against the Egyptian leader. Western statesmen tried condescendingly to warn the Egyptians that Nasser had «mortgaged their economy» to make the massive arms purchase from the Eastern bloc, but the economy proved able to take it.

On the other hand, the Soviet Union became popular with the Arabs. The arms which the Egyptian Army so badly needed to defend the country against the Western-sponsored State of Israel were purchased from the Soviet Union on a purely commercial basis. There was no question of «trickery» or «leaning to the Eastern bloc» as maliciously reported in the Western Press.

Egyptian acceptance of Soviet-bloc economic aid derived from different compulsions. A neutralist Afro-Asian government, faced with the most massive economic expectations from an impatient and poverty-stricken populace, takes a rather different view of external aid from that which makes a U.S. Congressman vote the funds for it. The Afro-Asian neutralist of the Nehru-Nasser pattern knows that the struggle against Communism will be fought out in his villages — not at the United Nations, in the map-lined planning rooms of Washington and London, or on the Soviet-Western cold-war frontier. The struggle in the villages is a question of getting things done quickly — new dams, factories, roads, hospitals. A second factor is the instinct of the Afro-Asian neutralist not to put all his country's foreign aid eggs in one basket.

In refuting the allegation by the West of Egypt's fast leaning to the Eastern bloc, here is one example to disprove it.

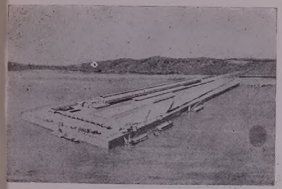
In the wave of anger and alarm that the Czech arms deal provoked in the West, the cautious stipulations Nasser made were ignored. He stipulated simultaneous delivery of five years' spare parts and ammunition with every plane, tank, or gun. The weapons were to come in bulk, not in the «trickles» experienced from the West. He stipulated the sale to Egypt of complete heavy munitions factories: the judicious purpose of these could not be more obvious. He arranged for Egyptian military personnel to be trained in the new weapons in Eastern Europe — specifically to keep down the number of Soviet-bloc personnel in Egypt. Ironically, after the Sinai-Suez war of 1956, he ruefully admitted that this method delayed training, to Egypt's great disadvantage in Sinai.

Again, in speech after speech, broadcast after broadcast, Nasser told the Arab world that the Soviet-bloc aid did not mean Communism; that «the path of Arab nationalism is different from that of Communism».

As for our trade relations with the Soviet Union, these we must point out have not reduced us to the status of a «satellite» as often claimed by the Western world. We wish to maintain our freedom of action with regard to both East and West and, on occasion, we dealt bluntly with the Communists. The incident of the Iraqi Communists who spread terror and massacred thousands of nationalists under the very nose of the mad dictator Abdel Kerim Kassem, is perhaps still fresh in the mind. Another case in point is our dispute in 1959 with Peking, when the Chinese Government permitted self-exiled Syrian Communist Khaled Bakdash to openly attack the United Arab Republic at a conference held at the time in the Chinese capital. The word-battles which ensued resulted only in the fact that both capitals have respected our policy of non-alignment.

At that time, the ink was not long dry on a huge Soviet loan agreement for the Aswan High Dam. But the Soviet Premier has not withdrawn this or any other Soviet aid to the United Arab Republic.

THE SUBSTRUCTURE OF THE HIGH DAM



The river-port of the High Dam

A project as gigantic as that of the High Dam and a development as important as that which is witnessed today by Aswan and its Governorate, required the elaboration and implementation of a vast substructure equal to the economic boom : construction of roads, aerodromes, the laying of railway tracks, the construction of public buildings and houses, the creation of new social and urban services (schools, hospitals, social and medical centres, electricity networks, water-mains, etc.)

An interconnected effort was exerted by all the central and regional Ministries and administrations, thus allowing the Governorate of Aswan to be in a position to rapidly have at its disposal the substructure indispensable to the various domains.

A vast road network was laid down, the most important roads being those which link the city of Aswan and its environs with the High Dam work site. The creation of new residential towns also required the laying down of multiple roads. A lovely shaded road today links Aswan with the reservoir. Nearly 500 kilometres were constructed, of which 37, forming part of the Governorate, are integrated in the great project of the Aswan-Cairo road link. Other roads have been built, or will be, linking Aswan with Edfu, Esna and the Red Sea. Young men from sixteen countries will participate this summer, in international work-camps, in the construction of the latter road, Aswan-Red Sea, whose great importance lies in ensuring, in the near future, the transport, by maritime routes, of the Governorate's industrial goods. Aswan will also be linked to the New Valley by wide roads across the desert.

River communications have developed considerably, and an important river fleet is presently being formed. The river line linking Aswan to Kom Ombo will be extended to Edfu, for the transport of passengers and merchandise. Iron ore extracted at Aswan is in part transported by the river route to Helwan, on the outskirts of Cairo, to be used at the iron and steel plant. The remainder is transported by railway. Rapid daily link-ups by river have been established between Aswan and the High Dam, Aswan and Edfu, and Aswan and Abu Simbel.

Railway communications have also been considerably developed, particularly to meet the demands imposed on them by the High Dam and the industrial boom of the Governorate of Aswan. A special line was laid linking Aswan with the work-site of the High Dam. Twelve trains run over it every day, transporting men and material; 144 railway wagons each day transport millions of tons of materials, sand, etc. The ancient steam locomotives have been replaced on the Aswan-Edfu line by diesel engines, while the passenger coaches are of the most modern type, with air-conditioning, sleepers and restaurant cars. Several express trains link the capital with Aswan, bringing thousands of tourists from all the countries of the globe to admire the archaeological remains and the gigantic work in the course of construction. These trains are ultra-modern, with every comfort, making this long journey of nearly 1,000 kms. a real pleasure.

Two aerodromes, one particularly for the High Dam, have also been constructed.

Construction has expanded naturally in a very considerable way, whether for public

buildings or houses. The most important project in this respect is the building of thirty-three villages at Kom Ombo, which will accommodate some 50,000 Nubians transferred there from land which will be submerged by the waters of the High Dam. We refer our readers to the article dealing with the work of the rehabilitation of the Nubians, and which illustrates the vastness of the work effected in this respect.

At Aswan itself, and in its suburbs, a multitude of buildings has sprung up everywhere to meet the influx of workers of all categories. In Aswan city itself the population has more than quadrupled in a few years, and from this one can estimate the importance of the construction work which has been undertaken.

The effort is all the more to be esteemed and respected because of the fact that nowhere can one see shanty-towns, which almost inevitably accompany rapid industrialisation. On the contrary, at Aswan everything was anticipated and arranged, and workers live in healthy, comfortable, newly constructed buildings and apartment houses.

Services, all services, were installed in time to meet the influx — potable water, electricity, post-offices, telephone exchanges, social and medical centres, vocational training centres and so on.

Culture and art were not ignored in this rational planning, which left nothing to chance. To Aswan go lecturers dealing with popular culture and formation. Faithful to one of its imperative principles, as well as to its essentially human nature, the Revolution pays just as much, if not more, importance to man and the work of reconstruction itself. Man, artisan of the reconstruction, continues to dominate the machine, and is not swallowed up by it.

Volume of material transported by railway

1. — Material for the High Dam.

	Tons
Clay, sand : 120,000 tons per year for eleven years	13,200,000
Liquid fuel : 50,000 tons per year for eleven years	550,000
Cement : 85,000 tons per year for six years	510,000
Iron for reinforced concrete and aprons : 15,000 tons per year for eight years	120,000
Heavy material, machines, cranes, etc : 12,500 tons per year for four years	50,000
Explosives : 1,250 tons per year for eight years	10,000
Wood : 5,000 tons per year for six years	30,000
Consumer goods : 5,000 cubic metres per year for eight years	530,000
TOTAL	15,000,000

(at an annual rate of 1.5 million tons).

2. Constant exchange with the Sudan by the river-route.

	Tons p
— Products imported from the Sudan	25,00
— Products exported to the Sudan	40,00
— Cattle and livestock bought in the Sudan. (80,000 head)	15,00
TOTAL	80,00

3. Exchanges by the river-route which aft the construction of the High Dam, will b effected by rail : 100,000 tons.

4. Travellers.

— Travellers coming or going from th North to the South of the country: 120,00 per year.

— Travellers going from Aswan to the Hig Dam : 38,000 per year.

— Total : half a million per year.

The River-Port of the High Dam

A provisional river-port was constructed close to the High Dam, but will be replaced by a large port in the near future. The latter will be ready to receive river boats when the level of the water in the storage basin reaches 150 metres above sea-level.

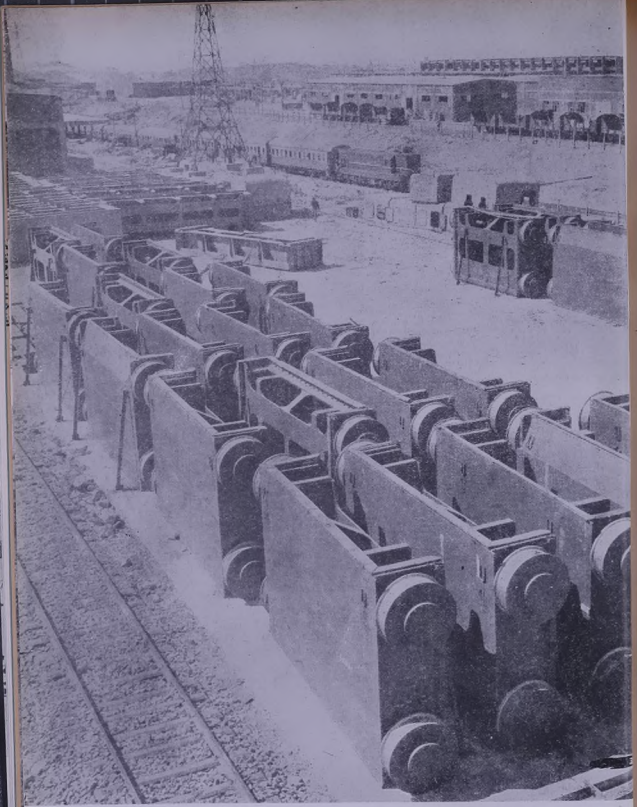
In addition to preparing a basin to receive river boats, the work also comprises the construction of a series of quays, a station for travellers, many large warehouses for merchandise from the internal areas, a quarantine station for cattle brought from the Sudan, elevators and goods-lifts, office buildings and the customs houses and other services.

The port will be one of the most important works of its kind, and was conceived in relation to the peculiarities of navigation in this part of the river.

With the increasing traffic in the southern seaport of the U.A.R., it was necessary to have a large aerodrome to receive the thousands of visitors to this historical town.

(top) Work is progressing on the downstream canal, the heads of canals and the downstream sand dyke. (below) The c

ruction of the High Dam requires the grading of hundreds of kilometres of roads, for carrying the equipment to the site.



The new railway station near the site, where Soviet machinery and equipment are unloaded.

THE CONQUEROR OF POVERTY

by Engineer Mohammed Sidky Soliman,
Minister of the High Dam

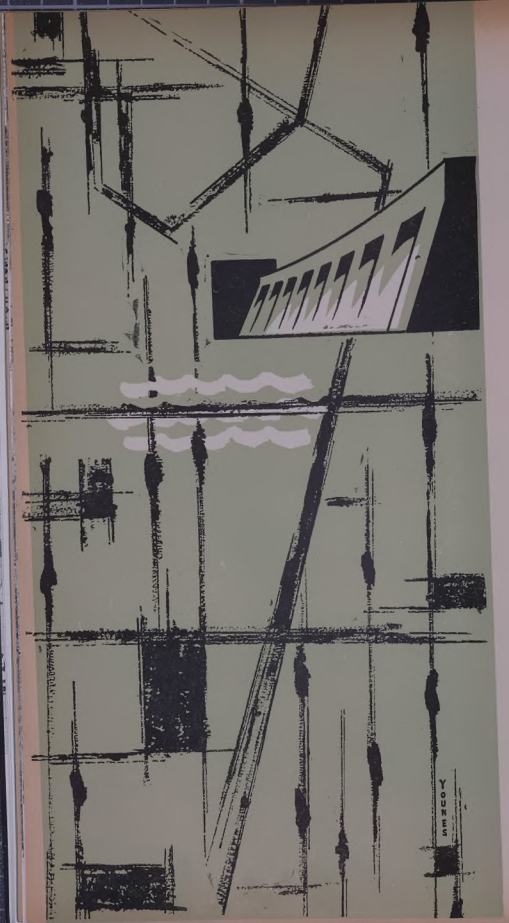
It is clear that through his policy, which is wholly inspired by the interests of his country, President Gamal Abdel Nasser has changed the course of history and the course of life in the United Arab Republic.

He changed the course of history by modifying the aspects, by frustrating the Machiavellian designs tending to enslave the people, to exploit and deprive them of a human and dignified existence, and by establishing democratic socialism.

He changed the course of life in the United Arab Republic by changing the course of the great river which, after having followed the same route for more than ten thousand years, has now entered another direction, full of promises and benefits for a people whose civilisation, culture and art are the most ancient.

It is no less clear that by completing today the work on the main part of this gigantic undertaking, which has aroused the admiration of the civilised world, both for the scientific innovations to which it has given rise and for the prosperity which it is called upon to bestow upon millions of citizens, the people of the United Arab Republic give proof of the firmness of their determination, of their sagacity and far-sightedness.

Similarly, it is with ineffable exultation that I look upon the future, with the completion of the first stage of this boldly humanitarian work entirely placed at the service of the welfare and happiness of the people of the UAR and with the accomplishment of which all efforts have been consummated. If this colossal work has not attained the summit, it has, nevertheless, expurgated one of the principal factors of poverty.



THE HIGH DAM AND THE RATIONAL UTILIZATION OF THE NILE WATERS

The United Arab Republic being one of the driest countries of the globe, it often happens that the greater part of the territory does not receive any rain for a whole year. On the Mediterranean coast the rains fall during the winter months(1) in the form of storms. Even these do not exceed 200 mm. while the quantity necessary for assuring normal vegetation is generally estimated at 400 mm. The most irrigated region in the country, the delta, receives only half the amount required to insure normal development of plants ; the few sudden downpours of winter rain allow certain meagre crops of barley to grow on the edge of the desert. The other zone in the U.A.R. which receives a light amount of rain in a fairly regular manner is the Red Sea coast, which faces the Nubian Desert. The north-east monsoon winds blow over it in the wintertime and are condensed on the fairly elevated heights in this region.

The general character of the dryness of the Egyptian climate is well illustrated by the following table, which shows the number of rainy days and the volume of perceptible rainfall in the course of 1960.

	No. of rainy days.	Volume of rainfall in mm.
Alexandria	74	198
Port Said	41	87
Cairo	12	21
Fayoum	18	46
Assiut	2	15
Aswan	8	8

Thus water is not supplied by the rain but by the Nile, which constitutes the basic factor of Egyptian agriculture. « The preponderance of the desert climate over the whole of the Egyptian territory is so strong that any vegetation is practically confined to the cultivable area. It is owing to the effort of numerous generations which succeeded each other in the rich Nile Valley that Egypt could produce an abundant crop of fruits, vegetables, cereals, and, quite recently, rice, sugar-cane and cotton » (2).

(1) In Arabic the same word is used to denote « winter » and « rain » (shita).

(2) cf. « Egypt » Economic Memento, National Institute of Statistics and Economic Studies, Paris, P.U.F. p. 10.

The basic problem thus consists of distributing the water of the river among the cultivated lands according to the rhythm required by the crops. It is consequently of primary importance to know the evolution of the Nile floods.

The flood begins in July, swells out in August and attains its peak in September ; the water begins to recede slowly towards mid-October ; the high flood is practically terminated at the end of December and the low water-mark is determined in May.

The difference between the high and low water level in Cairo is of an average 4.5 metres. On the other hand, the daily discharge of water in May barely exceeds 50 million cubic metres, whereas it attains 550 million cubic metres in September, thereby increasing tenfold during floodtime (1).

How was this flood water utilised ?

From time immemorial the people living on the banks of the Nile have endeavoured to make use of the best possible part of the flood waters. They began to employ the system of basin irrigation, or the Nile system, which remained until the end of the XIXth century just as it was at the time when it was first put into practice. It was replaced at the beginning of the present century by an entirely new system, that of perennial irrigation. To be able to understand the revolutionary power of this innovation, it is necessary to know the traditional system.

The system of basin irrigation consists of dividing the land into basins of 1,000 to 40,000 feddans by the construction of an embankment parallel to the river and as close to it as possible, meanwhile making it secure, and embankments perpendicular to the first embankments between them and the desert edge. When the Nile rises, the water enters these compartments by means of small canals equipped with water-gates and covers the land with a layer of water one or two metres deep. It is contained there for 40 to 60 days ; then, when the waters have receded sufficiently, it is discharged by the power of gravity. During this time the water has deposited its silt, and the procedure, repeated for thousands of years, has formed basins whose deposits have levelled out the surface so perfectly that they are drained totally without leaving even the smallest pool (2).

(1) cf. M. Pissot « Egyptian rural agriculture and economy », I.S.E.A. publication.

(2) cf. H.E. Hurst « The Nile, general description of the river and the utilization of its waters ». Bibliothèque géographique. Payot, p. 46 et seq.

The crop system, as was pointed out by Pierre Fromont (1), was extremely well adapted to these natural conditions. The seeds were sown soon after the waters receded, that is in October and November, as soon as the land was dry enough for them to penetrate. They were sown in the layer of silt deposited by the waters. It was not necessary to spread dung on the soil since the new silt deposits, wrung out of the volcanic lands of Abyssinia, are rich in fertilizing elements.

In the same way, no labour was necessary; a simple superficial scratching of the soil was all that was needed. Crops thus planted were called « shitwi » crops, or winter crops. They consisted mainly of beans, corn and barley. The crops were harvested in April, and until the inundation of mid-August the land remained bare and exposed to the strong scorching sun of the summer months. Extremely deep crevices were formed in the soil, and these crevices played the same part in airing the soil as vigorous labour.

They brought the hot summer air down to considerable depths (more than one metre) into the soil, and divided it into a series of ramifications ever smaller until they became capillary. In the period when the land is fallow, the volume occupied by the retreating air in this rich and very suitable soil is increased to 45 per cent and attains 40 to 50 per cent of the volume of the land, exceeding that which is found in the best ploughed soil.

« This explains why it was not necessary to till the land before the seeds were sown and why there was no need for any preparatory work on the soil. This also explains how irrigation could be perfect, as in this soil, thus tilled and deeply pulverized with the hot air, the irrigation water penetrated uniformly and to great depths » (2).

This was the traditional system employed throughout Egypt until the end of the XIXth century, and which continued to be employed in Upper Egypt over an area of approximately 350,000 hectares. It certainly had distinct advantages : it dispensed with the use of fertilizers, without which the soil is enfeebled and exhausted, and reduced to the minimum the effort consumed in tilling the land, facilitated by the humidity following submersion.

In return, it was subject to great inconveniences. In the first place it did not protect certain regions from dryness. This is what happened when the flood waters did not reach a level sufficient to be able to fill the elevated basins, an absolutely necessary condition for their cultivation.

Furthermore it permitted only a single crop : the winter crop. The summer heat would have allowed a second crop, but this was impossible since there was no water at that time, the Nile being then at its lowest level.

It was thus necessary to remove these inconveniences by thinking up a new form of irrigation.

The principal idea in this innovation was to regulate the Nile waters in a way that would enable their permanent utilisation, instead of using them periodically.

How to accomplish this ?

As the system of the river presents a succession of abundant flood water followed by very pronounced low water, it is necessary, firstly, to raise the water level so that irrigation may be possible in all seasons, and, secondly, to constitute water reserves during high floods to be used in the periods of low floods.

How is this possible ? Setting up barrages to store the flood waters to draw from them throughout the year, even during low floods.

We can classify the barrages constructed in the U.A.R. into two groups, according to the two aspects of the above-mentioned problem :

1. — Barrages for raising the water level whose function is not to constitute a storage reservoir, but simply, as the name indicates, to raise the level of the river behind them, so that part of the water will go into the canals whose entrances are situated upstream of their site. A barrage of this type must be able to allow the major part of the flood water to cross it, and consists of a large platform of masonry or concrete extending from one shore to the other and whose upper surface is approximate to the level of the river bed. On this platform is raised a strong bridge of masonry comprising arches with an opening of several metres between piers. These openings can be closed with metal sluice-gates which drop into appropriate beds; a mobile crane raises or lowers in such a way as to maintain the river upstream at the level necessary to feed the canals. The water can flow through openings or through two regulating gates managed at a height below that of the maximum upstream level (3).

These barrages are, from south to the north :

a) The Esna Barrage.

Started in 1906 and completed in 1908. It is 160 km. north of Aswan, and is equipped

(1) « Egyptian agriculture and its problems », Ph. D. course on rural economy, Université de Paris, Faculty of Law, Ed. Domat-Montchrestien, p. 19 et seq.

(2) cf. M. Berthault « Impressions agricoles sur la Basse-Egypte », Imprimerie Vollot, Alger, p. 4 and 5.

(3) cf. H.E. Hurst « The Nile », op. cit. p. 56.

with 120 sluices. It was reinforced through work begun in 1945 and completed in 1947.

b) The Nag-Hammadi Barrage.

Begun in 1927 and completed in 1930. It is 588 km. south of Cairo. It is composed of 100 sluices of six metres each, and is provided with a mobile bridge to allow navigation.

c) The Assiut Barrage.

This is 546 km. north of the Aswan Dam and 380 km. south of Cairo. Built in 1902, it has 111 sluices of five metres each and a mobile bridge to allow navigation.

d) The Delta Barrage.

This installation comprises two barrages. The first spans the Rosetta branch and is composed of 46 sluices of eight metres each and a mobile bridge for navigation. The other spans the Damietta branch and has 34 sluices and a mobile bridge for navigation. The barrage also contains a series of water-gates and sluices for harnessing the auxiliary water courses and canals which branch out of the Nile. Its construction was completed in 1939.

e) The Zifta Barrage.

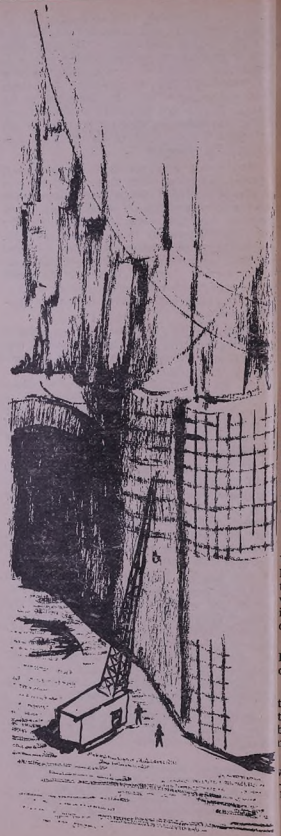
Situated on the Damietta branch at a distance of two kilometres north of Zifta and 87 kilometres from the Delta Barrage. It includes 50 sluices, each five metres wide.

f) Edfina Barrage.

Situated at a distance of 211 km. from the Delta Barrage. Begun in 1948, it was completed in 1951. It comprises 46 sluices, each of which is eight metres wide.

2. — The reservoir barrages, whose main function is to retain resources for the years of low floods by storing waters during the years when the water supply is abundant. This is the case notably with regard to the Aswan Dam which was constructed at the close of the last century. Work on it was begun in 1898, and it was completed in 1902. Its original capacity was 1,000 million cubic metres and its length was 1,950 metres. It had 180 sluices and gates installed at varying heights. The first elevation was begun in 1909 and finished in 1912 ; it was seven metres. It brought the storage volume to 2,500 million cubic metres. The second elevation was begun in 1929 and completed in 1933, allowing for storage of 5,000 million cubic metres of water.

All the works whose broad lines we have mentioned were fitted to the requirements of the time. Absolute necessity imposed the total utilization of the Nile waters by conserving the excess flood waters. But whereas the demographic increase of the country went on unhindered, the area of cultivated land and the quantity of resources remained stationary. A comparison between the growth in population in relation to the area cultivated and harvested under the former regime illustrates this point quite clearly :



Development of population in proportion to the area cultivated and harvested.

Year	Population in millions	%	Area cultivated in million	%	Per capita area in feddan	Area harvested in million feddan	%	Per capita area harvested in feddan
1897	9.7	100	5.1	100	0.55	6.7	100	0.70
1907	11.2	116	5.4	107	0.48	7.6	113	0.68
1917	12.7	131	5.3	105	0.40	7.6	114	0.60
1927	14.2	146	5.5	110	0.39	8.6	128	0.62
1937	15.9	164	5.2	105	0.33	8.3	124	0.52
1947	19.0	196	5.7	114	0.30	9.1	136	0.48
1952	20.4	221	5.8	116	0.27	9.2	137	0.42

(Source : Statistical bulletin of the Ministry of Agriculture, January 1954).

The preceding table shows that between 1897 to 1952 the Egyptian population increased from 9,714,000 to 20,425,000, or by 121 per cent. In the same period the cultivated area increased from 6,764,000 to 9,299,000 feddans (taking into account the accelerated rotation of crops due to perennial irrigation) — an increase of 37 per cent. Furthermore, the area « harvested », which was 0.70 feddan per capita in 1897, dropped to 0.42 in 1952.

To rectify the situation the Revolution government decided to build the High Dam, six km. south of the present Aswan Dam. The technical work effected from the close of 1952 showed that the construction of this dam would replace advantageously all the projects proposed to utilize the waters of the river wisely. Knowledge of these projects gives us a clear idea of the importance of the High Dam which, moreover, has the great merit of being situated on national territory.

These projects are :

— Construction of a vast reservoir on Lake Victoria controlled by a barrage at the Owen Falls. This installation would have constituted the principal reserve for storing over-year water, its role consisting of storing water during abundant years to increase the resources during bad years.

— A regulating barrage downstream from Lake Kioga to create an auxiliary to this main dam.

— A reservoir on Lake Albert to regulate the waters coming from the Semliki river and those coming in great quantities from the tributaries of Lake Kioga when the rain is abnormally heavy.

— A diversion canal at Jonglei which would offer passage for the volume of water which, without it, would importune Bahr-El-Jebel and would flow into the swamps of the southern region where they would disappear by evaporation.

— A dam on Lake Tana to increase the crops of Sudan and constitute a reserve for Egypt at the time of low floods.

— A barrage on the principal part of the Nile at the fourth cataract which would hold a large part of the flood waters and would regulate the water coming from Egypt.

— The establishment of a reservoir on Wadi-Rayah for protection against the flood waters and for storage of additional water at the time of high floods.

To understand the main function of the High Dam we should have an idea about « the theory of over-year or continual storage », or storage over one hundred years.

To explain this theory in the simplest way H.E. Hurst tells us(1) we shall consider the case of a river whose supply varies from one year to the next, and let us try to determine what should be the capacity of a reservoir whose supply we want to be the same from one year to the next over a certain number of years. Let us suppose that over ten years the water supply has been 5,8,3,7,1,2,9,5,6,4. The average supply thus is 5, and if it had been the same throughout the years, the total discharge of water which would have passed in ten years would have equalled the amount of water which actually passed. If we distribute 5 each year, we shall store during the 4 first : 0+3 = 2+2 = 3 and we would deduct previously 4+3, which would leave us with a deficit of 4 which would disappear the following year. In the ninth year the surplus will be 1 and we would finish at zero at the end of the period. In this event with a reservoir whose capacity is 7, by beginning with a stock reserve to 4 we would fill the reservoir at the end of two years;

1) c.f. « The Nile, general description of the river, utilization of its waters », op. cit. p. 277 et seq.

it would be full once more at the end of the 4th year and would drop once more to 4 at the end of the period. With our figures we need a capacity of 7. We shall see that we can get this capacity by adding up successively the differences with regard to the average, and then by finding the difference between the highest total and the lowest total which would give us the capacity of storage, allowing the average discharge during the whole period. However, this scarcely provides us with information with regard to the future since it is most unlikely that the same phenomenon will repeat itself again. We can, for example, have the same average, with the high years corresponding to the first part of the period, and the low years grouped in the second; and we would then need a storage of 10 to make good the deficit. It could also happen that the following 10 years would have an average of 4 instead of 5 or, instead of varying between 1 and 9, vary between 3 and 7. In both cases the results would be different. These figures show what takes place with natural phenomena and the complexity of the problem.

The mathematical approach, continues H.E. Hurst, helps us clear up these aspects of the problem.

The points of practical interest which rise from the calculations of this approach are the following : 'R' denoting the storage necessary to equalize the discharge during a period covering a certain number of years, this quantity varies greatly from one phenomenon to the next, and in the case of the same phenomenon varies from one period to the other, increasing with the length of the period. If 'R' denotes the storage necessary to obtain a regular supply equal to the average supply over a certain number of years, it is impossible in practice to obtain the average discharge indefinitely. In the first place because there is nothing like a determined discharge, and in the second place because the necessary storage increases with the duration of the period and is not inclined towards a stable value. But if we accept as a minimum a little bit less than the average, it is possible to dispose of a margin of security, a small reduction of the average supply entailing a small reduction proportionally much greater in the storage necessary to guarantee it.

In practice the manner of proceeding consists of choosing a reasonable length of time, determined by the conditions which we have to deal with, and in the case of the Nile reservoirs, one hundred years seem a suitable choice. 'R' can then be estimated by using the variability of the discharge, deducted from observations at our disposal which we shall substitute in the general formula laid down from observations of natural events. 'R' thus obtained, we shall apply to it a margin of security, as we have done in all the construction projects. This margin of security will be fixed according to the circumstances of each particular case.

The High Dam, whose conception is based on « the theory of over-year or long-term storage », explained above, will be 111 metres high and its length at the top will be 3,600 metres. Its width at the river bed will be 980 metres and at the top 30 metres.

The High Dam will form an artificial lake which will be the second largest in the world. The lake will stretch from the High Dam over a length of 500 km. and with a width varying between 10 and 25 km. It will have a depth of 97 metres and a capacity of up to 157 milliard cubic metres of water. Its capacity will then be 6.5 times that of the artificial lake of the Hoover Dam, the largest lake in America, and a little bit less than the artificial lake of the Kariba Dam in Rhodesia, the largest artificial lake in the world.

The High Dam will hold water at a level of 182 metres when storing 130 milliard cubic metres of water.

The plans and the specifications for the High Dam are the same as those adopted for the construction of dams made of rock blocks. It will have an impermeable platform and a vertical curtain, or wainscotting, injected by reinforced concrete. Its upstream part will be supplied with a horizontal layer linked to the platform.

The work of the first stage of the project includes the construction of the upstream coffer-dam. This will form part of the main dam and once completed it will be used to hold the water upstream. It will be 50 metres high and 550 metres long, and will help store the surplus waters for the requirements of irrigation of the new areas of land. We can thus state that the first stage in the construction of the High Dam will constitute the first step towards the realization of the economic advantages of the project in the field of agricultural expansion.

After the completion of work on the first stage of the project (envisaged for the current month) the Nile waters will flow into the diversion canal being dug at present in the rock land situated on the eastern bank of the Nile at the site of the dam. It is a canal open in its front and rear parts, dug from the rocks, but at the centre of the canal the water passes through six tunnels each with an internal diameter of 15 metres. They are coated with a layer of concrete two metres thick. They are also fitted with powerful, strong gates which will regulate the water discharge.

In its fore part, the canal is 1,150 metres long. The width, which at the beginning is 250 metres, shrinks to 50 metres and then grows again to attain 230 metres at the opening of the tunnel. The second part of the canal, behind the tunnels, is 485 metres long and 278.5 metres wide, which will decrease until it reaches 50 metres at the outlet.

The water discharge of this diversion canal will reach 150 million cubic metres daily, a capacity which exceeds by far that of any other artificial canal in the world.

The High Dam not only aims at creating a reserve basin capable of insuring the storage over « one hundred years » of the main Nile. It also aims at producing a vast quantity of electrical energy, with the help of which the country can develop considerably its industrial sector.

That is why one of the main stages of the High Dam is the construction of a powerful electric power station. This power station will be installed at the upstream extremity of the tunnel. It will comprise 12 units for generating electricity, functioning by means of « Francis » turbines with a power of 175,000 kw. The aggregate power of this station will amount to 2,100,000 kw., which places it among the most powerful hydraulic stations in the world.

Transformer stations will be installed, raising the tension of the current from 15,750 volts to 500,000 volts, to be able to transmit it to regions where it will be used.

Twelve of these transformers are of a capacity of 137.5 megavolts. A second group of twelve transformers, each with a capacity of 93 megavolt amperes will succeed in raising the electric tension from 15,750 volts to 132,000 volts.

The programme for the execution of the High Dam work has been established in the manner that will allow it to be put into effect according to the following stages :

— The upstream coffer dam storing water at a level of 135 metres, the downstream coffer dam, a canal for the diversion of the course of the river, the foundations of the electric power station and the right wing of the main dam will be completed in the course of the current month.

— The main dam storing water at a level of 155 metres will be completed in 1967, the date at which will begin the « continual » storage of the Nile waters. In the course of the same year work will proceed for the installation of one of the lines of the high tension electric network of 800 K.V. between Aswan and Cairo, as well as all the auxiliary lines of 132/200 K.V. and the transformer stations.

— In 1968 the main dam, which will have a level of 196 metres, and the electric network will be completed, and a second high tension line (500 K.V.) between Aswan and Cairo will be installed.

In the course of the same year five new generator groups will be installed, bringing the power of the station to 2,500 million KwH.

— In 1969 the generating units will be eight and the energy generated will reach 5,500 million KwH.

— In 1970 the number of generators in the power station will be 11 and the energy generated will reach 8,000 million KwH.

— At the beginning of 1971 all the 12 generators of the power station will have been installed, thus bringing the power capacity to 9,000 million KwH.

— The energy generated by the power station will reach its maximum in 1972, with an output of 10,000 million KwH.

The total cost of construction of the High Dam is L.E. 213 million, divided as follows :

	L.E. millions
Construction expenses of the High Dam in its final phase	85.5
Indemnities for the inhabitants of Halfa and Nubia	20.0
Construction expenses of the electric power station including civil works	57.5
Installation expenses of electric lines and transformer stations	50.0
Total	213

In addition to this sum, the construction of the High Dam requires several other ancillary projects, such as projects for irrigation, land improvement, road construction, public services, housing, etc.

If we add the investment necessary for all these enterprises to the initial cost of the project, the total sum allotted for the construction of the High Dam and other ancillary projects will amount to L.E. 415 million.

Expenditures have somewhat exceeded the envisaged sums « by reason of the increase in salaries, transportation costs, social insurances for the workers and a few other services » (1)

It is to be noted that the First Five-Year Plan for Economic and Social Development (1960-1965) earmarked a sum of L.E. 97 million for the High Dam project. On the other hand, the sums appropriated for this project from the budget of the current year (1963-1964), totalled L.E. 66 million. As for the technical aid which the Soviet Union has proffered for the project, it has reached, up to the present, L.E. 113 million, in the form of material and technicians. It comprises the installation of the hydro-electric power station and the setting up of the lines which will transmit the current to the delta.

We shall now review the work completed in the project.

Preliminary work was begun in 1955, and access roads to the site on both the eastern and western banks of the river, together with a soil research laboratory, were completed in 1957.

The government took up again these preliminary work and constructed a subsidiary road ending at the temporary river port at Kondi which will replace the present port of Shellal.

On January 9, 1960, President Nasser laid the foundation stone of the project, thus marking the start of work.

Ever since, work has been in continual progress. Workshops, stores, compressed air stations and explosives' depots have been constructed, and an electric cable has linked the Aswan Dam electric power station to the site of the new dam. The construction of the necessary internal roads is under way. Installations of water, lighting, etc. as well as machines and material, are available.

From January 9, 1961, work was accelerated for the construction of houses, stores, water-works and electric lines serving the work site and coming from the Aswan power station.

Detailed estimates of the project have been laid down and work on hydraulic, geological and topographical researches is proceeding apace.

The upstream cofferdam and the downstream cofferdam, together with the right wing of the Dam, the diversion canal and the foundations of the power station, have already been constructed.

(1) Press conference held by Engineer Mohammed Sidky Soliman, Minister of the High Dam, in Cairo on July 19, 1963.

The digging of the diversion canal is the basis of the success of all the programme envisaged for the work of the first stage of the project, the stage which will be completed within the current month with the diversion of the river through the canal.

The construction of the High Dam ranks among the most productive projects in the world by reason of its considerable advantages, which can be listed as follows :

1. — Satisfying the irrigation requirements of all present and future agricultural lands, even during the periods of minimal flood, which will contribute to the increase in the yield of the land.

2. — Improving the drainage of cultivated land in a manner that will increase output, extend the execution of drainage projects and reduce expenses.

3. — Guaranteeing the cultivation of one million feddans in rice annually, whatever the state of the river.

4. — Complete protection against the dangers accompanying high floods without heightening or reinforcing the present embankments of the Nile, work which involved heavy expenses each year. We will thus be able to prevent damage to crops due to seepage of water, and we will also eliminate the employment of watchmen who now man the Nile embankments during flood periods. These guards can henceforward devote their full attention to farming.

5. — Improvement of river navigation.

6. — Guaranteeing a head of water at the present barrages of the Nile all the year round, thus facilitating the generation of hydro-electric power and making possible the construction of more barrages to take advantage of the water slope of the river and produce electricity.

Owing to their extreme importance, we write the following advantages :

The realization of the first stage of the project will allow the storage of 4,000 million cubic metres of water in January 1965 ; 6,000 million cubic metres in 1966 and 8,000 million cubic metres in 1967.

The surplus supply of stored water will be sufficient to convert an area of 700,000 feddans from basin to perennial irrigation, in addition to reclaiming large areas of presently uncultivated lands.

The importance of this conversion lies in the fact that with perennial irrigation it is possible to produce two or three crops instead of one crop from this area. The crop rotation in this area is effected according to the following biennial rhythm :

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The realization of the first stage of the project will allow the storage of 4,000 million cubic metres of water in January 1965 ; 6,000 million cubic metres in 1966 and 8,000 million cubic metres in 1967.

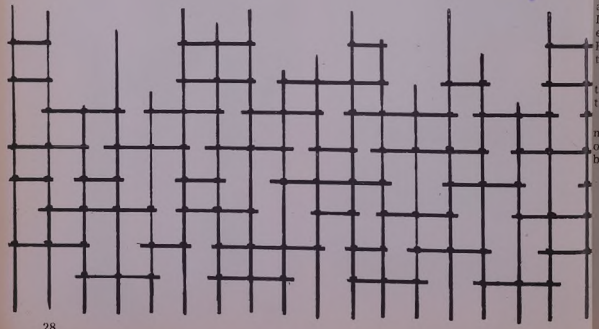
The surplus supply of stored water will be sufficient to convert an area of 700,000 feddans from basin to perennial irrigation, in addition to reclaiming large areas of presently uncultivated lands.

The importance of this conversion lies in the fact that with perennial irrigation it is possible to produce two or three crops instead of one crop from this area. The crop rotation in this area is effected according to the following triennial rhythm :

	Cotton Zone	Rice Zone
1st Year	March-October : cotton	November-March : clover (temporary) April-October : cotton
2nd Year	November-June : clover and beans July-November : maize (fallow)	November-April : clover May-December : rice
3rd Year	November-May : cereals June-November : maize (or fallow) November-February : clover temporary (or fallow)	November-May : barley June-November : rice (or fallow)

After the introduction of perennial irriga-tion we shall adopt a biennial crop rotation :

1st Year	November to February... clover (temporary) or fallow March to October... cotton
2nd Year	November to April-May... cereals (corn, barley) April-June... beans and clover July-November... maize



Consequently, in the present crop rotation system, cotton and maize occur only once every three years ; in the biennial system they occur once every two years.

The surplus waters will make possible, as we have already pointed out, the reclamation of approximately 1,000,000 feddans of new land.

Detailed programmes have been laid down based on the improvement of 150,000 feddans annually, which necessitates the carrying out of irrigation and drainage projects. These projects will cost L.E. 73 million.

After the execution of the High Dam project and certain other ancillary projects (the employment of subterranean waters and the transformation of the methods of irrigation thereby making possible the exploitation of approximately 2.7 milliard cubic metres of water, projects which will cost L.E. 3 million) the area of agricultural lands will reach 7,700,000 feddans, compared with the present six million feddans.

The construction of the High Dam will guarantee the production of hydro-electric power at the rate of 10 milliard KwH annually, about five times the energy produced by the existing Aswan power station.

The importance of such an advantage is made clear by the following facts : until 1952 the country was underdeveloped with regard to sources of electric energy. In fact, the individual's share of electricity was 45 KwH per year, whereas in some countries, such as Switzerland, it is 2,000 K.W.H. The world average is 600 K.W.H. annually. The total electric energy produced in 1952 was 1,050 million K.W.H., which was increased to 3,973 million K.W.H. in 1962 after the installation of the stations of Talkha, Damanhur, Suez, North Cairo, South Cairo, the expansion of the stations of Al-Atwani and Nag Hammadi and the expansion of the electrification project at the Aswan Dam.

After the execution of the High Dam, electric power will reach 16.5 milliard K.W.H. and the individual's share will be 525 K.W.H.

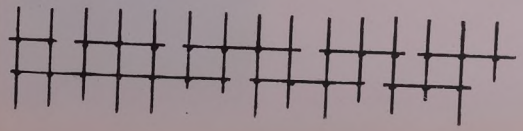
Translated into monetary terms the aforementioned advantages following the execution of the project and its auxiliary enterprises will be :

A. — **Increase in the National Income**

	L.E.
1 — Increasing the present cultivated land by about one million feddans and converting the lands in Upper Egypt from basin to perennial irrigation	68,000,000
2 — Guaranteeing water requirements for present and future crops, even in years of minimal floods ; improving drainage and guaranteeing the cultivation of 700,000 feddans in rice annually	56,000,000
3 — Protecting the country against the dangers of high floods and preventing seepage in adjoining lands and the inundation of small islands and river banks	10,000,000
4 — Improving navigation conditions as a result of the control of the downstream river flow	5,000,000
5 — Producing electric power annually of about 10 milliard K.W.H.	100,000,000
Total	234,000,000

B — **Increase in State revenues**

1 — Increase resulting from taxation of newly cultivated lands and on the increased output of lands cultivated at present	9,000,000
2 — Increase resulting from improvement of navigation and the saving of expenditures used for protection of the Nile dams and other measures	2,500,000
3 — Increase resulting from the electrification of the High Dam	10,500,000
Total	22,000,000



The income accruing from the project in proportion to expenditure is estimated at 57 per cent, a very high proportion. This means that the project will be amortized in less than two years, without taking into account the sums entering the State Treasury from the sale of reclaimed land.

Finally, we would like to point out that the advantages accruing from the construction of the High Dam are not confined to the UAR ; the Sudan will also benefit from the following advantages :

— The area of cultivated land will be approximately three times the present area.

— The State annual income, as well as the national income, will increase by approximately 300 per cent.

— Guaranteeing present and future water requirements for irrigation for all cultivated areas.

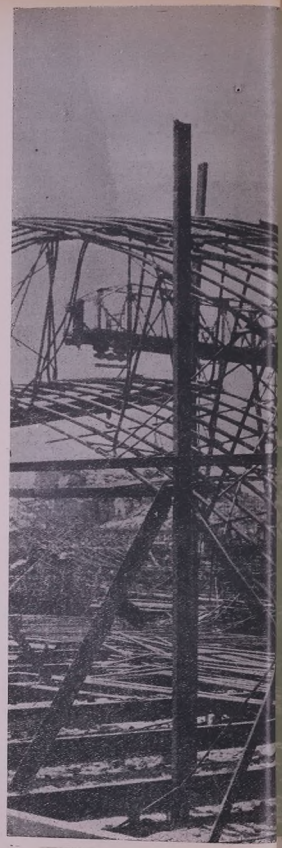
— The Sudanese reservoirs will be filled with relatively clear water, reducing the pressure of silt deposits in the reservoirs.

— The dams being constructed by the Sudanese government for the production of electric power will be much more efficient.

— Cultivation of long-staple cotton will be considerably stepped up.

The High Dam, the first stage of which will be completed this month, will guarantee for our country the total utilization of the Nile waters by storing the surplus flood waters ; it will make possible the cultivation of 850,000 hectares of additional lands, a more efficient drainage system and, in addition, the complete navigability of the river. Finally, it will produce 10 milliard K.W.H. of energy at a minimal price and thus multiply by thirty the industrial possibilities of the country. Truly, the High Dam has become « the symbol of the will of the people, of its determination to fashion life and to grant the right of ownership to multitudes of fellahs who, for long centuries under a feudal system, were deprived of this right » (1).

(1) U.A.R. National Congress for Popular Powers. The Charter.



CHARACTERISTICS OF THE HIGH DAM

- Volume : 43 million cubic metres (or seventeen times the size of the Great Pyramid of Giza).
- Length at the summit : 3,600 metres.
- Width at the base : 980 metres.
- Height from the river bed to the summit : 111 metres.
- Width of the road to the summit : 40 metres.
- Length of the lake : 500 kilometres.
- Average width of the lake : 10 kilometres.
- Length of the deviation canal : 1,950 metres.
- Number of tunnels : 6.
- Number of adjacent tunnels : 12.
- Length of each tunnel : 282 metres.
- Width of each tunnel : 15 metres.
- Number of electric turbines : 12.
- Capacity of each turbine : 175 kilovolts.
- Power of the station : 2,100,000 kilovolts.

THE LARGEST ROCKFILL DAM IN THE WORLD

— in volume,

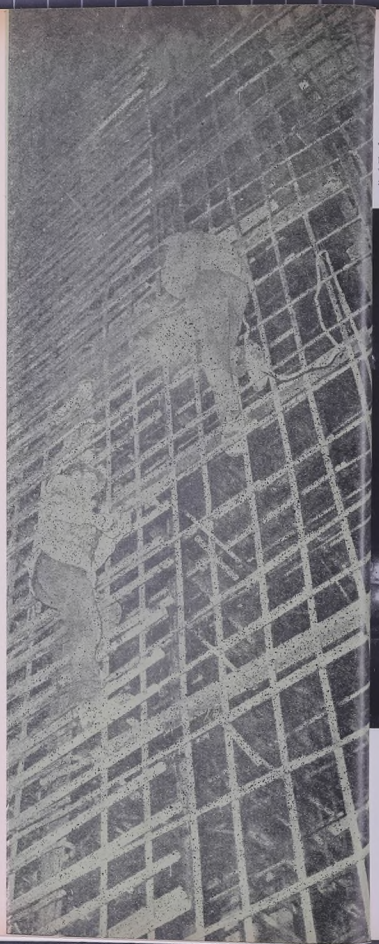
— in capacity,

— as a source of electric energy.

BENEFITS

— The national income will increase by L.E. 234 million per annum.
— One million two hundred thousand feddans will be reclaimed.
— Seven hundred thousand feddans will be converted from basin irrigation to perennial irrigation.
— The surface of rice-fields will be increased to one million feddans.
— Irrigation will be regularized.
— Drainage system will be improved.
— River navigation will be improved.
— The country will be safeguarded against flood hazards.
— Ten milliard kilowatts/hour of electric energy will be produced each year.
— New industries will be created.

The site is equipped with huge up-to-date workshops for such jobs as mild steel bars and lining of tunnels.



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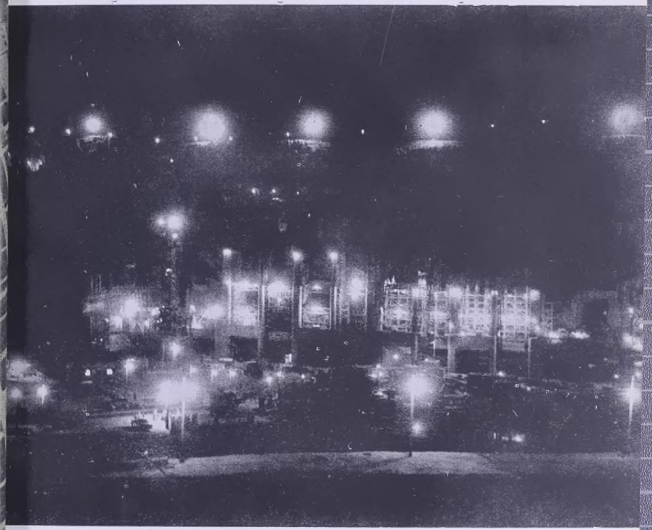
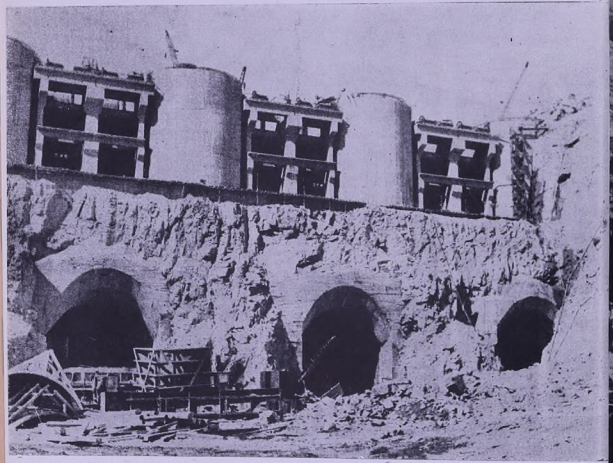
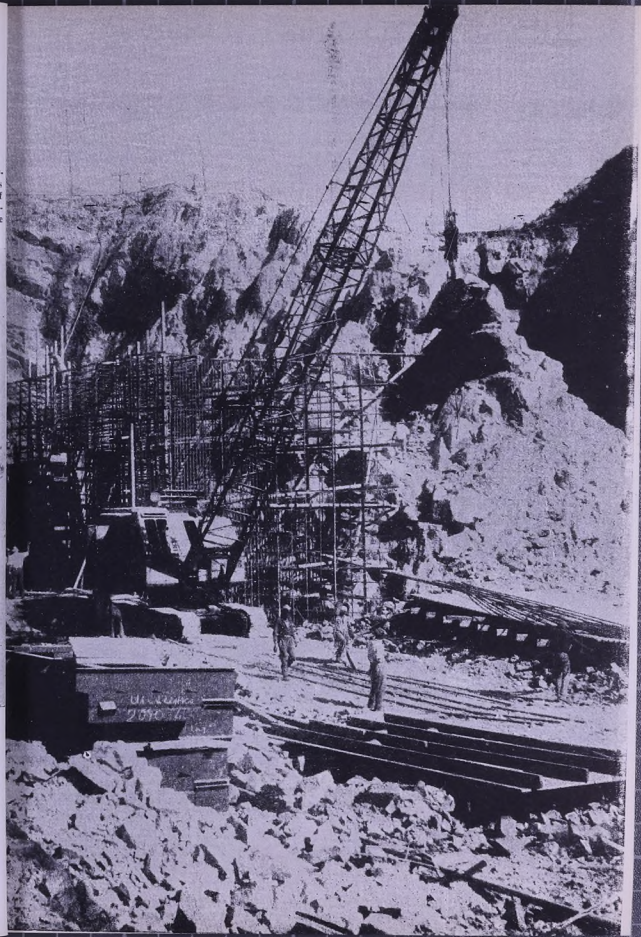
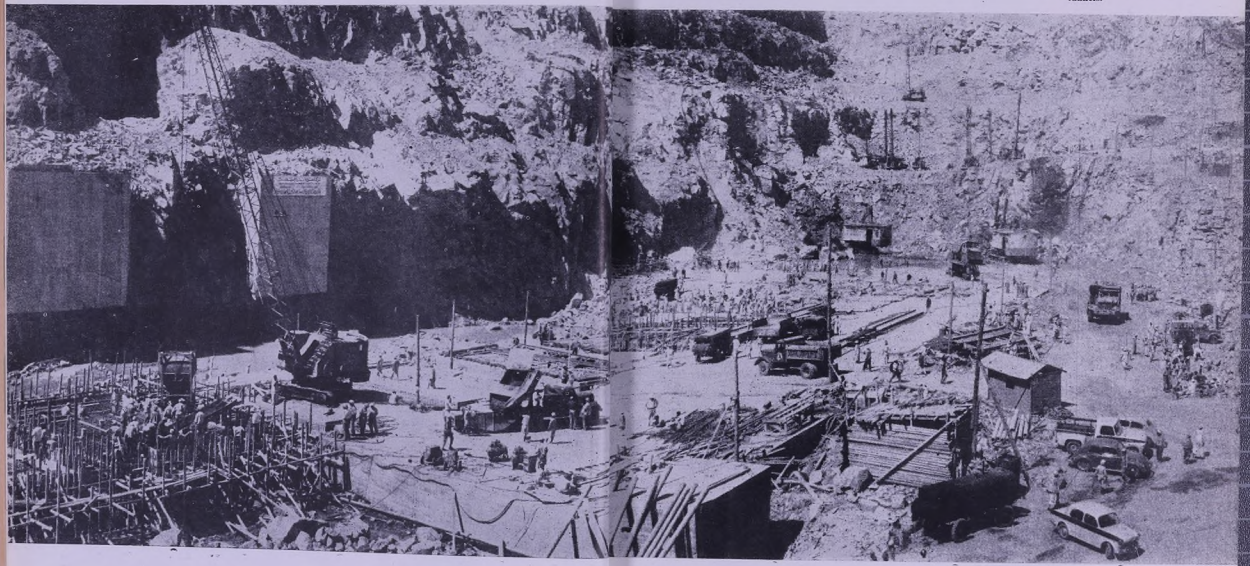


The site bustles with traffic, night and day.

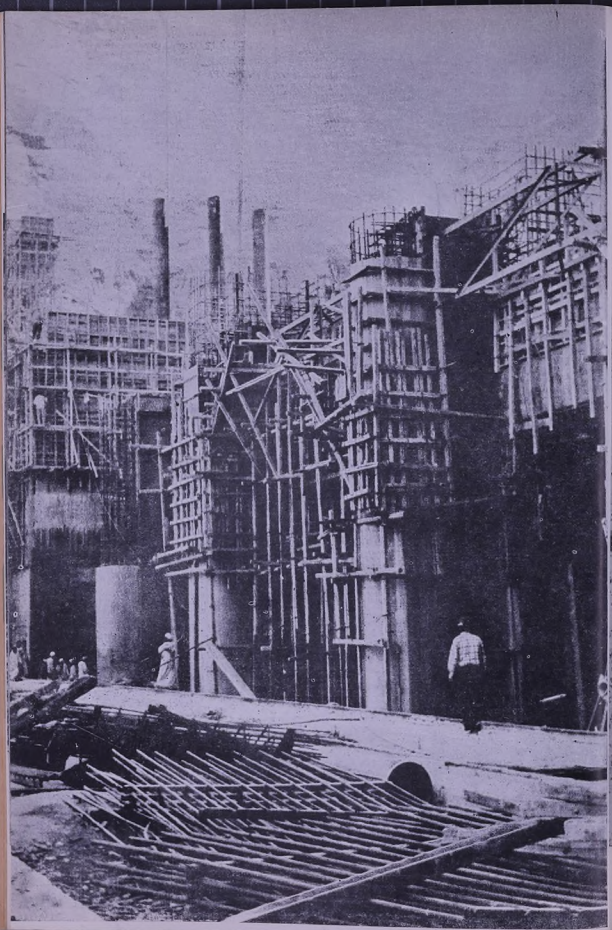
(right) Mammoth excavators and drilling machines are busy the 24 hours of the day. (below) The tunnel inlets dug out in the granite rock.



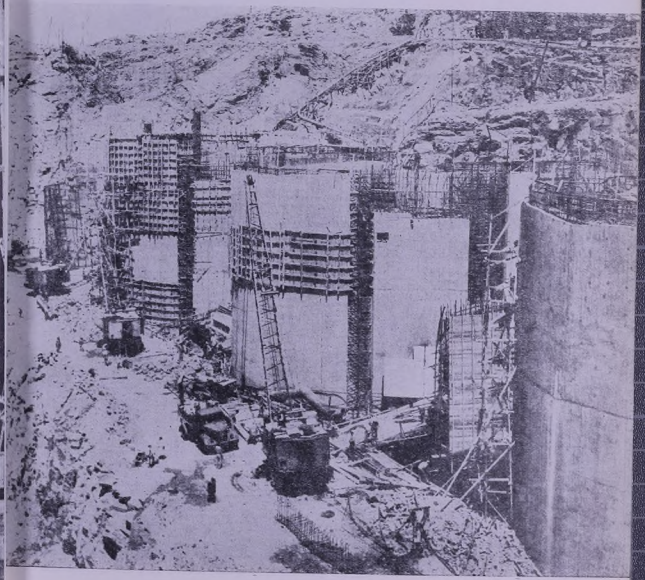


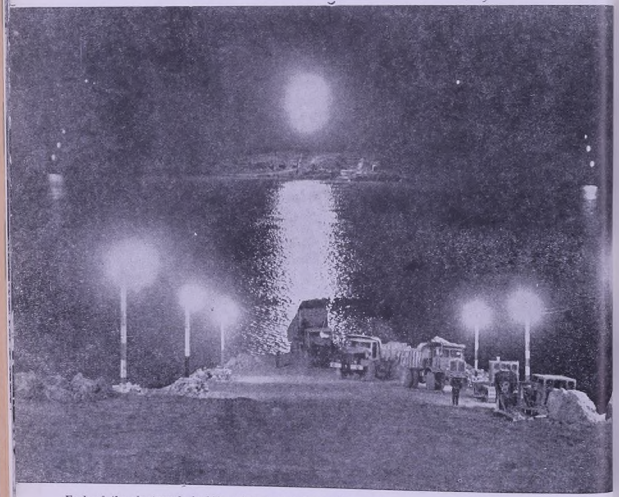


A general view of the preliminary work in the construction of the power-house in the posterior stream of the tunnels.

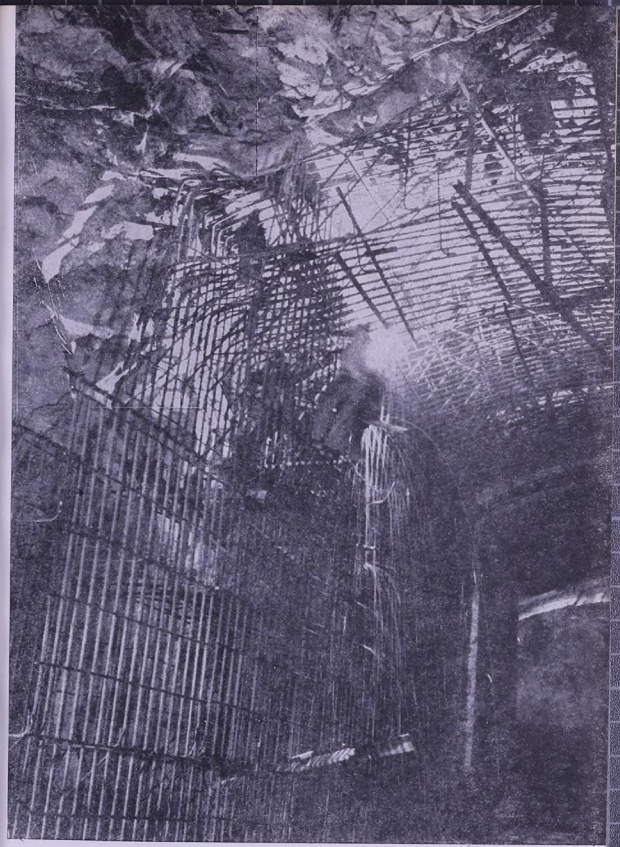


ncrete laps for the tunnels.





Each of the six tunnels is 240 metres long and a section of 14 x 13.5 metres. They are equipped with levelling flood-gates.



The Events of May 15

« Next May 15 », said President Gamal Abdel Nasser during his address to the National Assembly, «our generation will have the opportunity to witness the changing of the Nile's course through the diversion canal. This will not only be a historic spectacle, it will also be proof of the presence of human will power, and the fact that, with God's help, it can harness and subjugate nature, affirming its domination over it and overcoming all obstacles.»

May 15 will mark the end of the first stage of construction work on the High Dam. To permit the diversion of the Nile, the base of rock and sand must be completed in time, which constitutes the upstream partial dam. Also, tunnels must be dug in the rock for a volume of 368,338 cubic metres forming the diversion canal for the river. At the same time, the foundations for the hydro-electric power station at the end of the tunnels must be laid.

On May 15, the up-stream dam will span the Nile (980 metres) with the exception of an opening of 120 metres, which will be closed that day, in the presence of President Nasser and his guests. To do this, 100,000 cubic metres of small stones and sand must be dumped into the water in the space of 48 hours at the most. This will require the mobilisation of an already-loaded fleet of barges and 140 lorries. Some 33,000 cubic metres of small stones and 22,000 cubic metres of sand have been dumped into the river each day.

On the evening of May 15, the gap in the dam will be no more than 80 metres. And then, in order to reduce the pressure on the sluice gates, giant pumps will begin to divert the river water into the lateral canal, where the water will reach the required level in three hours.

On the morning of May 16, while work on the construction of the up-stream dam continues at full speed, President Nasser and his guests will detonate dynamite under the sand dams constructed at both ends of the lateral canal, thus allowing the waters of the Nile to rush in.

By dawn on May 17, the up-stream dam will have been completed along its entire length, and the two sand-dams at the two lateral ends will have completely disappeared. Thus the Nile will have entirely changed its course.

These are the operations which will take place between May 15 and 17. What will take place afterwards is easy to describe. With the arrival of the flood water, the volume of water in the diversion canal will increase gradually until it reaches 38 cubic metres per second. It is noteworthy that the pressure of the Nile water, on rather the force of the current, usually never exceeds two cubic metres per second. This gigantic pressure will feed the twelve electricity generating units, furnished with turbines of 175,000 kilowatts and operated by a water-fall over a slope of 40 to 65 metres.

During the entire flood period the sluices will remain open and will start to be gradually closed as from next September, assuring as of now, the storage of four milliard cubic metres of flood water, allowing the implementation of the perennial irrigation system for 700,000 feddans presently under basin irrigation. Next year, volume of stored water will reach nearly eight milliard cubic metres.

This work, as we stated previously, will mark the end of the first stage of the High Dam construction operation, which is the most important and difficult stage. The second stage will begin with the construction of the partial down-stream dam, which will intercept the muddy water and prevent it from infiltrating into the area in which the main dam will spring up. It is a question of avoiding silt deposits in that area, and helping, together with the up-stream dam, in the construction of the main dam in the middle of still water, free from currents.

The overall cost of the construction of the High Dam during this first stage is estimated at L.E. 100 million. Soviet aid for this stage — L.E. 35 million — was completely absorbed. The balance was provided by Egyptian financing and currency.

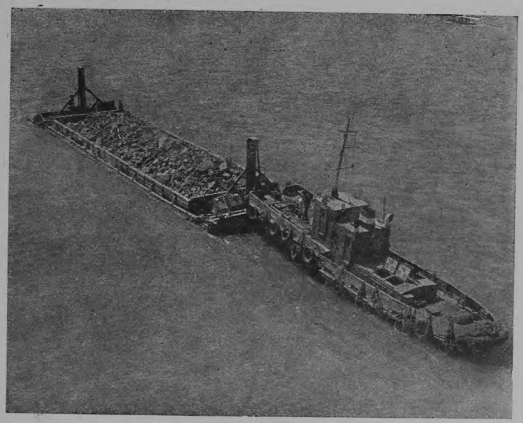
1. Here, the water will run at a speed of 34 metres per second.

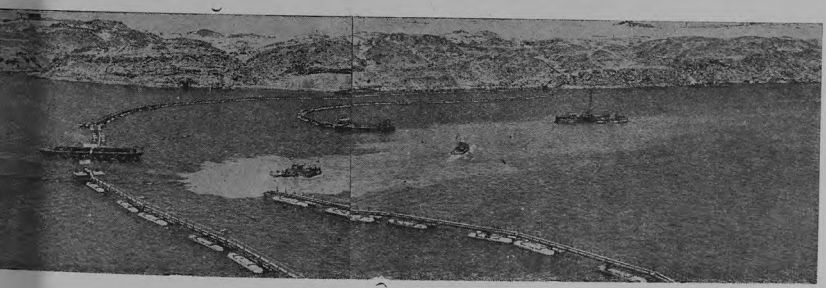
2. The six tunnels of the deviation canal.

3. The giant flood-gates of the tunnels spanning the actual dam.

4. The partial dike upstream, which will divert the river waters.

5. The barges which will be loaded with gravel and sand, in the first hours of May 1.





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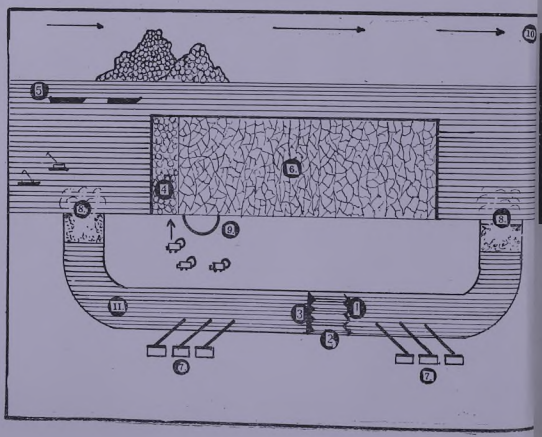
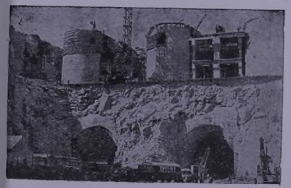
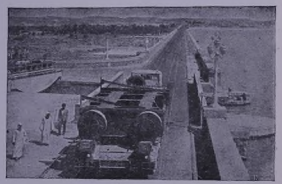


6. **The main dike stretching over a length of 3.5 metres.**
7. **The pumps which will feed the deviation canal.**
8. **The sand dike which will be dynamited on May 16, to let the waters rush into the deviation canal.**
9. **The dais of honour, at May 15 ceremonies.**
10. **Cairo.**
11. **The left bank of the Nile.**





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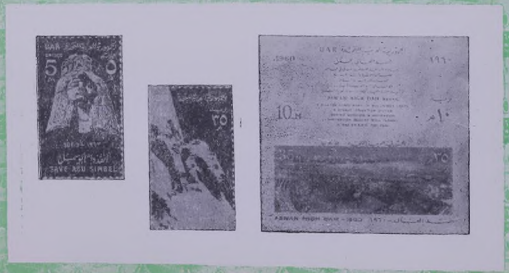
Aswan and Nubia through Philately

The Holy See has kindly contributed to the saving of the monuments of NUBIA by issuing stamps bearing their effigy.



LAW No. 194

organizing the Higher Committee for the High Dam

(Official Gazette No. 37)

November 11, 1958

1 — The Higher Committee for the High Dam enjoys a moral status and independent assets. Its president represents it in its relations with other organisations and all judiciary disputes. He can give his mandate to one or several members of the Committee to undertake the responsibilities of administration.

2 — The Committee is competent with regard to everything pertaining to the High Dam project, which includes the work for water storage with a view to increasing the agricultural area, the defence of the country against inundation by flood, the generation of electric power and other annexed projects.

It is particularly competent for: 1 — Research and studies necessitated by the High Dam project. 2 — The plans required for the execution of the High Dam and other projects as well as means for financing them. 3 — The execution of the High Dam and other annexed projects whether directly or through any organisms it may choose. To this effect, the Committee can establish departments for the direction of the works which it intends to entrust to them and commission any ministry or public organisation to undertake the study of any project within a set delay.

3 — The Committee will form subcommittees for the study of particular questions pertaining to its projects and the control of their execution. It can associate other members of its choice, experts or technicians. Each sub-committee, presided over by a member chosen by the Committee shall present its report to the latter for examination and approval.

4 — The Committee may charge experts or technicians to accomplish special missions against remuneration to be left to its discretion.

5 — The Committee may contact the competent ministries with regard to matters pertaining to the High Dam and annexed projects.

6 — The ministries, public organisations, or organisations of public interest shall provide the Committee with the employees, technicians, reports, studies, information and statistics required of them.

7 — The Committee disposes of an independent budget, insured by credits effected to it in the State budget or proceeding from any other source.

8 — The Committee may contract loans with the guarantee of the State, on the terms and conditions approved by decree of the President of the Republic.

9 — The Committee manages its assets according to the regulations. Its expenditure is authorised only within the limit of the credits available and the approved previsions of plans. The excess of receipts in each fiscal year is transferred to the following fiscal year.

10 — With regard to its funds, officials and employees, the Committee is not subject to the laws and regulations of the Govt. departments, or to the control of the State budget, concerning its projects as a whole, whether those implemented by it or through the intermediary of any organisation, ministry or public institution. The Committee or the person authorised by it, is empowered to conclude contracts for the execution of works or the purchase of material according to the prescriptions of its statutes.

11 — The Committee establishes its regulations for the organisation of its works, the running of its accounts and any other business concerning it under the benefit of the control of the Accounting Court within the limits of its statutes. The Committee is not subject to the dispositions of the law on public organisations.

12 — The Committee presents to the President of the Republic its annual balance-sheet within the three months which follow the expiration of the fiscal year.

13 — The Higher Committee for the High Dam fills the place of the High Dam Organisation in all that concerns its rights and obligations.

14 — The law of October 19th, 1955, No. 508 (Official Gazette 81e) which instituted the High Dam Organisation is abrogated.

AGREEMENT

concerning the usage of the Nile waters

(Official Gazette 1—1960)

November 8, 1959

Considering that the full utilization of the Nile waters for the benefit of the United Arab Republic and the Republic of Sudan requires the regulation of the projects for full control of the river and the increase of its supply, as well as the laying down of new technical bases other than those being actually applied;

considering that the creation and the management of these works require a complete understanding and collaboration between the two Republics, for the purpose of regulating the usage and the utilization of

the river waters in the manner to guarantee their present and future needs;

considering that the Nile waters agreement of 1929 has regulated only certain usages of the Nile waters and does not comprise the complete control of the river waters;

the two Republics have agreed upon the following:

I — Present acquired rights.

1 — The quantity of Nile waters utilized by the U.A.R. up till the signing of the present agreement constitutes an acquired right, prior to the obtention of the advantages which will be realized by the projects relating to the control of the river and the increase of the supply indicated in the present agreement; the said right being 48 milliard cubic metres annually at the height of Aswan.

2 — The quantities utilized by the Republic of Sudan at the present time constitute an acquired right, prior to the obtention of the advantages which will be realized by the above-mentioned projects. The amount of this right is fixed at 4 milliard cubic metres annually at the height of Aswan.

II — Projects for the control of the river and the sharing of the benefits realized by the two Republics.

1 — To control the river waters and with a view to preventing them from being wasted in the sea, the two Republics have agreed that the U.A.R. should undertake the construction of the High Dam at Aswan as the first link in the chain of projects for continual storage which will be constructed on the Nile.

2 — To enable the Sudan to exploit its share, the two Republics have agreed that the Republic of Sudan should undertake the erection of a barrage at Roseires, on the Blue Nile, and all other projects deemed necessary by the Sudan for the exploitation of its share.

3 — The net quantity of water saved with the help of the High Dam will be estimated on the basis of the average natural supply of the river at Aswan during the years of the present century, estimated at approximately 84 milliard cubic metres annually. The quantities acquired by the two Republics and which are indicated in Article 1 and estimated at Aswan will be deducted from this figure, as well as the average losses resulting from the amounts stored by the High Dam. The rest will constitute the net quantity which it has been agreed will be divided between the two Republics.

4 — The net quantity of water saved with the help of the High Dam will be divided between the two Republics on the basis of the proportion of 14.5 milliard for the Sudan and 7.5 milliard for the U.A.R., as long as the discharge remains in the neighbourhood of the average discharge indicated in the preceding paragraph. This means that if the average discharge is approximate to the average of the preceding years of this century, estimated at 84 milliard, and if the losses resulting from continual storage remain at their present level, that is 10 milliard, in this case the net quantity going to the High Dam will be 22 milliard. The share of the Republic of the Sudan will then be 14.5 milliard and that of the U.A.R. will be 7.5 milliard. These two shares will be added to their acquired rights so that the net share after the functioning of the High Dam will be 18.5 milliard for the Republic of Sudan and 55.5 milliard for the U.A.R.

In the event the discharge exceeds the average, the difference will be divided equally between the two Republics.

5 — Having been acknowledged that the net quantity of water supplied by virtue of the High Dam and indicated in paragraph 3 is estimated on the basis of the average natural discharge of the river at Aswan during the preceding years of the present century, the official acquired rights of the two countries and the losses resulting from continual storage in the High Dam having been deducted, it is agreed that this quantity will be subject to revision by the two parties concerned after a sufficient period, on which they shall agree, starting from the full functioning of the High Dam reservoir.

6 — The Government of the U.A.R. agrees to pay to the Government of the Republic of Sudan a sum fo L.E. 15 million by virtue of contractual indemnification for the damages caused to present Sudanese property, resulting from storage in the High Dam at a level of 182 metres (survey). The payment of this sum and the manner agreed upon by the two parties will be the subject of a document annexed to the present agreement. (1)

III — Projects for the exploitation of the water wasted in the Nile drainage-basin.

By reason of the loss of substantial quantities of Nile waters in the marshes of Bahr El Jebel, Bahr El Zurar, Bahr El-Ghazal and Nahr El-Sobat, it is necessary to prevent these losses with a view to increasing the discharge of the river in the interest of the development of the agriculture of the two countries. For this reason, the two Republics have agreed upon the following:

1 — The Republic of Sudan, with the agreement of the U.A.R., will undertake the implementation of projects of a nature to increase the supply of the Nile by preventing losses in the marshes of Bahr El-Jebel, Bahr El-Ghazal, Bahr El-Zurar and Nahr El-Sobat. The benefits accruing from these projects will be divided between the two countries, which will participate equally in the expenses of the projects. The Republic of Sudan undertakes to pay the expenses of the said projects and the U.A.R. will pay its share in the same proportion as is incumbent upon it, by reason of the benefits which it will derive from them.

2 — If the needs of the agricultural expansion of the U.A.R. require the execution of a project of this kind at the time when the Sudan is not at all in need, the

(1) The payment of indemnities estimated at L.E. 15 million will be effected in Sterling pounds or in a third currency, according to the agreement of both parties, on the basis of the stable parallel of 2.87156 U.S. dollars to the Egyptian pound.

The Government of the U.A.R. will pay this sum in the following manner:

L.E. 3 million on January 1st, 1960.

L.E. 4 million on January 1st, 1961, 1962 and 1963.

U.A.R. will inform the Sudan of the date suited to it for the execution of the said project. Two years after the date of this notification, each of the two Republics will submit a plan for the exploitation of its share of water, with the date of this exploitation. This plan will involve the two parties. After the two years have expired, the U.A.R. will undertake implementation, at its own expense. When the Sudanese Government is ready to exploit its share, in conformity to the plan agreed upon, it will pay to the U.A.R. its share in the overall expenses, a share proportionate to the benefit derived from the project, on condition that the share of each of the two Republics does not exceed half the total benefit of the project.

IV — Technical cooperation between the two Republics.

1 — To realize technical cooperation between the governments of the two Republics and to carry out the studies and research necessary for the projects for control of the river and the develpment of its supply, the two Republics have decided to establish a joint and permanent technical organism, in which each country shall be equally represented. This permanent organism will be formed from the time of the signing of the present agreement.

The attributions of this organism will be :

a) To draw up the broad lines which aim at increasing the supply of the Nile, and to control the studies necessary for drawing up complete projects to be submitted to the governments of the two Republics for the purpose of being approved.

b) To control the implementation of the projects adopted by the two governments.

c) To lay down an order for the installations to be established on the Nile inside the Sudanese frontiers, as well as an order for the installations which will be established outside the Sudanese frontiers, in agreement with the authorities concerned in the countries in which the said projects will be effected.

d) Having been acknowledged that it is possible for years of poor floods to succeed each other, entailing a decrease in the level of storage at the High Dam, thereby rendering it incapable of satisfying the full needs of both countries in any year, the organism will lay down an order to be followed by the two Republics to enable them to face up to such a situation in the years of poor floods, in a manner that will not bring any damages to either of the two countries, and the said organism will submit its recommendations to this effect for approval by the two governments.

2 — In the desire to enable the commission to exercise the attributions indicated in the preceding article, and to make possible the observation of the level and the discharge of the river in its upper reserves, the said attributions will be exercised under the technical control of a group of engineers from the Sudanese Republic and the United Arab Republic, in the Sudan, the U.A.R. and Uganda.

3 — The two Republics will issue a joint order for the formation of the joint technical organism and the setting up of the budget necessary for it on funds supplied by the two countries. The organism will convene in Cairo or Khartoum according to the circumstances of work. It must lay down rules of procedure approved by the two governments, for the purpose of organizing meetings and for its technical, administrative and financial work.

V — General stipulations.

1 — If it appears necessary to examine questions relating to the Nile waters with a party other than the two Republics, the governments of Sudan and the U.A.R. will decide upon a common attitude as regards this subject, after a study by the above-mentioned organism. The negotiations, which will be undertaken with the countries in question, will be made on the basis of the opinion expressed by the said organism.

If there is an agreement concerning the execution of installations on the river outside the frontiers of the two Republics, the joint technical organism will draw up, in agreement with experts of the governments concerned, the technical details concerning the implementation, functioning and the protection of the said work. The organism shall furthermore be entrusted with supervising the execution of the technical installations which will be eventually constructed.

2 - Having been acknowledged that the countries bordering on the Nile, other than the two Republics, lay claims to a part of the river waters, the two signatory countries have agreed to make a joint examination of the demands of these countries and to adopt a common attitude concerning them. If it is decided to grant part of the river supply to a third country, this quantity will be shared equally at Aswan level.

The joint technical organism is charged with seeing, in case of an agreement with third countries, that they do not take a quantity greater than that agreed upon.

VI — Transitory period prior to drawing benefits from the High Dam.

As the reciprocal benefits which the two Republics will derive from the High Dam will not be obtainable until after the complete implementation of the work, the two parties will come to an agreement concerning the system of their agricultural expansion during the transitory period, which will come to an end with the complete construction of the High Dam, in a manner that will not affect their present requirements of water.

ANNEX No. 1

relative to the loan of water which the U.A.R. will contract.

The Republic of Sudan agrees to the principle of granting the U.A.R. a loan of water deducted in advance from its share of High Dam water, thereby enabling it to pursue its plan of agricultural development.

The request of the U.A.R. on this subject will be made after re-examining its plans within a period of five years from the signing of this agreement. If this re-examination reveals that the U.A.R. is still in need of this loan, the Sudan will grant it within a limit not exceeding 1.5 milliard cubic metres of water : this loan should be reabsorbed by November 1977.

Note — The agreement and the letters exchanged were approved by the Decree of October 6, 1959, No. 1774 and published by order of the Minister of Foreign Affairs, fixing the date of their enforcement at November 22, 1959.

PRESIDENTIAL DECREE-LAW No. 67 for 1962
concerning the expropriation of Land to be flooded by the waters of the High Dam

In the name of the nation

The President of the Republic

After taking cognizance of Article 51 of the provisional Constitution, of Law No. 577 for 1954 concerning the expropriation of real estate for the public weal or for improvement.

And of Law 252 for 1960 concerning the amendment of some of the provisions concerning expropriation for the public weal and the appropriation of real estate.

has decreed the following law:

Article I.

Shall be considered works for the public weal, the project for lands to be flooded by the High Dam which lands fall between the said dam and the frontiers of the United Arab Republic and the Republic of Sudan, situated at the level of 182 metres above the level of the Mediterranean Sea calculated in front of the High Dam according to maps to be prepared by the Survey Department.

Article II.

The lands referred to in Article I shall be expropriated in the manner specified by this law, together with the buildings, structures, trees and palm-trees which the inhabitants have set up on government land.

Article III.

In exception of the provisions of the above-mentioned Law No. 577 for 1954 and Law No. 252 for 1960, the owners of the estates referred to in Articles I and II shall be indemnified for the lands, buildings, palm-trees, trees, water-wheels, wells and other structures existing at the time when the provisions of this law are enforced — according to the following rules:-

First : The areas or localities for which indemnities are estimated in accordance with the plan of flooding the land and emigration are to be specified in detailed lists according to the measures to be decreed by the Minister of Works. These lists shall show the real estate and establishments which were delimited, together with their area, situation, the names of their owners, their place of residence and the indemnities decreed for them.

A copy of these lists shall be sent to the Ministry of Social Affairs, the Expropriation Section in the Survey Department, the Survey inspector at the district of Eneiba and the mayor of this area. These lists together with a copy of the maps of the said areas shall be publicised for a period of thirty days for the information of the people concerned.

This publication shall be announced at least one week before it takes place, at the governorate headquarters, the markaz and the mayorality. It shall also be published in the Official Gazette and three daily newspapers with wide circulation, specifying in the announcement the date of publication, its duration and place.

Second : The people concerned, be they owners or holders of rights, or anyone whose name and belongings were not mentioned in these lists, have the right to protest against the data stated in them starting from the beginning of the period fixed for the publication of these lists until the end of the thirty days following their limit, otherwise this data is considered final.

Protests shall be presented to the Head of the Protest Committee or to the Survey inspector in the district of Eneiba, in a registered letter, or they may be presented directly, against a receipt.

Third : If the protest is related to ownership or any other real right on the estates stated in the above-mentioned lists, it must be accompanied by the documents establishing this right and must be presented during the period fixed for the protest, otherwise it will not be taken into consideration at all.

If the protest pertains to the value of the indemnity, it should be attached to a government postal order for a sum equivalent to 2% of the value of the increase subject of the protest, provided this sum is not less than P.T. 50 or does not exceed L.E. 10. If this protest is not attached to the full fee it will not be taken into consideration.

Any estimates against which no protests are filed during the fixed period are considered final and the payment of the indemnity shall free the government of its obligations in all respects.

Fourth : Any protests pertaining to ownership, real rights and indemnities, as well as protests pertaining to ownerships which were disregarded in the estimation of the indemnities shall be settled by one or more committees each headed by a judge chosen by the Ministry of Justice. The members of this committee shall include a representative of each of the following: the Ministry of Social Affairs, the Ministry of Works (Survey Department), the Aswan Governorate Council. The committee may also include two members to be chosen by the Governor from among the members of the National Union for the area in which the estate is situated, on a consultative basis only.

In the case of equal votes the opinion of the Head of the Committee shall be decisive.

The committee shall notify the person concerned of the meeting at which the protest shall be considered in a registered letter two weeks before the date of the meeting from the date of notification.

The committee takes decisions on the protests speedily and its decrees are final, not liable to protest by any means whatsoever.

Fifth : A committee formed of representatives from the Ministries of Works (Survey Department), Social Affairs, the Treasury, and the Interior shall undertake to pay the indemnities in each sector. It can be assisted by any employees it may choose for this purpose.

Protest against the cost indemnity does not prevent the person concerned from receiving the idemnity es-

timated according to the lists referred to in Section One, nor does it prevent waiting for a decision over petitions or the forfeit of rights thereto.

Payment shall be effected within a maximum period of one month from the date in which the right of opposition is presented or from the date of issuing a decision with regard to it.

The people concerned may deputate whoever they may wish to receive the indemnities, by virtue of a deputation on a special form prepared for the purpose at the Payment Committees or the Survey Inspectorate or the Expropriation Section at the Survey Department. The signature on the deputation is to be ratified — without fee — by a police department.

No fiscal duty or signature fee is to be collected on the payment of the indemnities.

Article IV

As an exception to the stipulations of Part Five of Article III, the indemnity may be effected wholly or partly in land, or buildings to be prepared by the government for this purpose.

The Minister of Social Affairs will issue a decree on the details of the bases organising this procedure.

Article V.

This decree-law shall be published in the Official Gazette and shall enter into force from the date of its publication.

The Ministers shall, each according to his competence, implement this law. Issued at the Presidential Palace on March 5th, 1962.

The President of the Republic

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Explanatory Note

on

Decree-Law No. 67 for 1962.

Whereas the storage of water before the High Dam will flood wide areas of land, the necessary measures have been taken to define these areas and all existing buildings, establishments, agricultural land, trees and palms on them preliminary to the indemnification of their owners either in cash or in kind;

And since the storage will be started during the flood of 1964 and as the period of time remaining until this date is insufficient for carrying out indemnifications of the thousands of people concerned, either through amicable means or through having recourse to the measure stipulated in the Expropriation Law No. 577 for 1954, and that regardless of the number of employees to be charged with this task, it is difficult to effect it within the appointed period;

It was, therefore, thought necessary to issue special legislation to meet this situation with ease, without following the ordinary measures stipulated in the Expropriation Law referred to above, through the setting down of special bases which shall provide sufficient guarantees for the owners whose property is expropriated and ensure the speedy estimation of the indemnities and their payment to them, or their indemnification in land in areas prepared for this purpose. It was taken into consideration that the basic principles on which the Expropriation Law is based are preserved as far as possible.

As the lands to be flooded by the waters of the High Dam include lands owned by private individuals in addition to the areas owned by the State, including land previously expropriated on the occasion of the second heightening of the Aswan Dam.

Thus Article I of the decree-Law has stipulated that the project for lands situated at the level of 182 metres above the level of the Mediterranean Sea, shall be considered works for the public weal. These lands extend to the north before the High Dam as far as the frontiers of the United Arab Republic and the Republic of the Sudan, according to maps to be prepared for this purpose.

Article II of the Decree-Law provides for the expropriation of the land referred to together with the buildings, structures, trees and palm-trees which the inhabitants have established on government land. It is evident that the indemnity will not include whatever buildings, structures, trees and palm-trees which may have been previously expropriated and indemnified on the occasion of previous heightenings of the Aswan Dam or forced storage for extra high flood levels, as there is no justification for double indemnification for one case.

It is obvious that the land which has been previously indemnified partly due to their lesser exploitation and which enters within the areas to be expropriated according to this law, it is only just that the indemnity to be effected for them should be in accordance with their present state.

Article III of the draft law provides for the bases to be followed with regard to the definition of the properties to be flooded and which shall be advertised, the manner of opposition and issuing decisions on them as well as the manner of payment of the indemnity.

It was taken into consideration in the formation of the committees which shall issue decisions on the oppositions that they should be headed by a judge in order to ensure the sound implementation of the provisions of the law, and so that it may be possible to look into the opposition in the light of the bases of the justice and the provisions of the law. In the formation of each committee, it was also taken into consideration that it may be able to estimate the circumstances of surroundings, the people's standard of living and their social and cultural state, as well as whatever facilities may be required for the opposers in the methods of establishing their rights. All the dates pertaining to the publication, presentation of oppositions, and taking decisions on them were also shortened in comparison with the provisions of Law No. 577 for 1954 concerning the expropriation of real estate for the public weal or amendment, due to the circumstances and dates of implementation of the High Dam Project and the preservation of the rights of those concerned and in keeping with the public interest.

As it was decided to find areas for emigration and the granting of lands and the establishment of buildings for the people of Nubia who are actually living in the areas to be flooded by the waters of the High Dam, it was stipulated in the draft that it is possible to indemnify by the granting of land and buildings owned by the government instead of

the estimated cash indemnity, whether with regard to the whole or part of the indemnity. The Minister of Social Affairs shall issue a decree on the basis which shall regulate this exchange and the measures governing it.

The Ministry of Works has the honour of submitting the attached draft law to the President of the Republic in the text approved by the State Council in its letter 144-2-49-2542 dated 9-11-1961.

For approval and promulgation.

The Minister of Works.

AGREEMENT WITH THE U.S.S.R. concerning the project for the implementation of the High Dam, approved by Decree No. 8 of January 9, 1959 (Official Gazette No. 2n.)

December 27, 1958

The governments of the U.A.R. and the U.S.S.R., impelled by the friendly relations which exist between them, and in their desire to strengthen economic and technical cooperation between them on a basis of equality and non-intervention in internal affairs and full respect for the dignity and national sovereignty of each of the two countries, and in view of the great importance of the High Dam project at Aswan to the national economy of the U.A.R., have agreed upon the following :

1. — In answer to the desire of the Government of the U.A.R. to develop its national economy, the Government of the U.S.S.R. expresses its readiness to cooperate with the Government of the U.A.R. in constructing the first stage of the High Dam at Aswan

The first stage comprises the construction of the front part of the main dam, with a height of 50 metres and a length of 600 metres, and the downstream coffer dam with a height of 27 metres and a length of 600 metres; together with work on the diversion of the waters and the sluices, as well as the supply of equipment and instruments necessary for this work. The two parties will agree on measures in the course of study of the details, or whenever the need arises in the course of implementation.

The first stage also includes projects for converting the basins and the projects of irrigation and land reclamation for the purpose of utilizing the surplus waters resulting from this stage. The volume of assistance offered by the Soviet side will be determined by the agreement of the two parties as regards the implementation of these projects, after the U.A.R. has completed the studies necessary for the execution of these projects.

It is agreed that all the expenses which will be assumed by the Soviet side, whether for the construction of the Dam itself or for implementation of the works of irrigation and the conversion of the basins, imputed to the loan, will be covered within the limit of the loan offered, according to Article 5 of this agreement.

2. — In implementation of the cooperation stipulated in Article 1·

a) The Government of the U.S.S.R. undertakes, through the medium of Soviet organisms, to prepare for the execution of the work as well as the necessary research which will be agreed upon by the two parties, with the aim of introducing amendment or modification to the details of the drawings whenever it is deemed necessary, conforming to the agreement with the competent U.A.R. authorities, on condition that this should take place in the shortest time possible and according to the conditions and hydraulic specifications and the basic information drawn up by the U.A.R., on condition that these modifications agree with the final plans for the Dam.

b) The Government of the U.S.S.R. will supply the sluices, machinery and equipment — with a supply of necessary spare parts — as well as the material required for the construction and functioning of the first stage, and the projects related to it, in a perfect manner; material which is not available in the U.A.R.

c) The Government of the U.S.S.R. will offer the technical aid necessary for construction. To accomplish this it will send the required number of Soviet experts to the U.A.R., according to the agreement concluded between the two parties.

3. — The Government of the U.A.R. will create a special organism for the management of the project. It will be entrusted with questions of an administrative, technical and financial nature. The implementation of the work which the Government of the U.A.R. will demand within the framework of the first stage will be entrusted to contractors agreed upon by the two parties and this on the basis of the employment of Soviet equipment and the cooperation of Soviet specialists and experts.

The contract to be concluded between the Government of the U.A.R. and the contractors will include, apart from the plans and specifications of the work, all the obligations of the contractors and the services and facilities which the Government of the U.A.R. will extend.

The above-mentioned organism will supervise the contractors to make sure of the implementation of the obligations required of them according to the contract, and this organism will be charged with the services and facilities stipulated in the article.

4. — The Soviet organisms will be responsible for the technical management relating to the construction work of the first stage of the High Dam at Aswan and the execution of all work in a perfect manner, and will also be responsible for the fitting of the machines and their operation within the time limit agreed upon by both parties, and on condition that the special organism and the contractors mentioned in Article 3 fulfil their obligations as to the operations of research, fitting and construction, according to the implementation programme with regard to similar operations following the agreement between the two countries

To this effect the Soviet organisms have delegated to the U.A.R. a highly efficient Soviet expert as well as the necessary number of engineers, technicians and skilled Soviet workers, according to the agreement concluded between the two parties.

The Soviet expert, with the collaboration of the organism mentioned in Article 3, will attend to the organisation of work between the Soviet and U.A.R. specialists for the technical supervision of the said work.

5. — The Government of the U.S.S.R. offers the U.A.R. Government a loan of 400 million roubles (the rouble is equal to 0.222163 grammes of pure gold) to cover cost of the operations to be carried out by the Soviet organisms for all matters relating to the execution of the projects as well as the studies and researches, the delivery of machinery, equipment and material on the basis of Soviet ports prices free of charge (FOB), and the travel fares of Soviet experts from the U.S.S.R. to the U.A.R. and back, in accordance with Article 2.

In the event total value of the above-mentioned machinery, sluices equipment and material estimated on the basis of free of charges Soviet ports prices, plus the transportation expenses of Soviet specialists and the expenses of Soviet organisms which comprise the technical assistance included in the framework of this agreement, exceeds the amount of the loan, that is, 400 million roubles, the Government of the U.A.R. will pay the excess amount to the U.S.S.R. by supplying it with U.A.R. merchandise, according to the trade and payments agreement in force between the U.A.R. (Egyptian Region) and the U.S.S.R.

6. — The Government of the U.A.R. will reimburse the utilized sums of the loan, granted to it in accordance with Article 5 of this agreement, in twelve equal annuities commencing one year after the complete execution of the work on the first stage of the High Dam at Aswan and the filling up of the basin, on condition this is not later than January 1, 1964. The date of the utilization of the loan with regard to machinery, equipment and material will be that of the acknowledgment of the receipt of consignment. For expenses relating to the plans, studies and research, and the expenses of the delegation of Soviet experts and specialists sent to the U.A.R., the date of the utilization of the loan will be that of the vouchers.

The rate of interest on the loan is 2.5% per annum, starting from the date of the utilization of each part of the loan, and will be settled in the course of the first three months of the year following that of their falling due.

7. — The Government of the U.A.R. will reimburse the loan and its interest by depositing in Egyptian pounds (the rate of the Egyptian pound being 2.55187 grammes of pure gold) the sums due in a special account opened at the U.A.R. Central Bank (Egyptian Region) on behalf of the U.S.S.R. State Bank.

The price of the rouble with regard to the Egyptian pound is estimated on the basis of the gold balance between the two foreign currencies on the day of payment.

The Soviet organisms will use all the sums deposited to their account to buy articles from the U.A.R. (Egyptian Region) in accordance with the trade and payments agreement in force between the U.A.R. (Egyptian Region) and the U.S.S.R.

It is also possible to transfer all sums deposited in this account to sterling pounds or to whatever other transferable foreign exchange following agreement between both parties. If the rate of the Egyptian pound is changed, the evaluation of the balance opened on behalf of the U.S.S.R. State Bank will be referred to the date of this change at the Central Bank of the Egyptian Region of the U.A.R. in accordance with the modifications which will occur and in comparison with the gold contained in the Egyptian pound.(1)

8. — The Central Bank of the Egyptian Region of the U.A.R. and the U.S.S.R. State Bank will open special accounts to register the operations relating to the loan offered in accordance with this agreement and its execution, as well as the interest due by virtue of this agreement ; and the two banks will agree upon the financial and technical measures necessary for its implementation.

9. — The Government of the U.A.R. will pay for the Soviet party all the expenses incurred by the Soviet organisms relative to the expenses of food and accommodation, as well as the travel expenses of Soviet experts — inside the U.A.R. — delegated to offer their technical services according to this agreement and by virtue of the conditions stipulated in the special contracts. The settlement of these expenses will be made by adding these sums in Egyptian pounds to the « collect » account opened at the Central Bank of the U.A.R. (Egyptian Region) in favour of the U.S.S.R. State Bank, by virtue of the payments agreement in force between the U.A.R. (Egyptian Region) and the U.S.S.R.

10. — The supply of machinery, equipment and material, as well as the preparations for the project, the studies and research and the dispatch of Soviet specialists to the U.A.R., will take place in accordance with the agreements to be concluded between the U.A.R. and the competent Soviet organisms, in conformity with Article 2.

The contracts will determine in particular the sums, date, prices and guarantees concerning each kind of material and machinery, and the responsibility of each party with regard to the circumstances independent of the will of each of them, as well as the violation of the provisions of invention patents, and the

(1) It is agreed that the U.S.S.R. will not use the sums deposited in the said account except for the purchase of merchandise from the U.A.R. It is also agreed that at the time of the utilization of the said amounts the U.S.S.R. will enjoy the same rights, advantages and discounts accorded by the U.A.R. for exports in free foreign exchange in conformity with the system in force at the time.

The U.S.S.R. will be entitled to demand payment in sterling pounds or in a freely convertible foreign currency which will be subject to the agreement of the two parties concerned only in exceptional cases which will not permit the U.A.R. to employ the same payment concerning exports in free currency or when the U.A.R. will be unable to offer the merchandise required by the U.S.S.R. within a period of six months.

With regard to Article 5 which stipulates that the rate of the rouble in gold is 0.222168 grammes of pure gold, it is agreed that if the price of the rouble changes in relation to the gold standard before reimbursement of the loan, the balance will be modified in conformity with the change, so that the value of the balance in question remains as is.

provisions and conditions relating to the implementation of obligations of the Soviet party according to this agreement.

The cost of equipment, machinery and material delivered to the U.A.R. by the U.S.S.R. by virtue of this agreement will be determined on the basis of prices in effect on world markets.

11. — Without prejudice to the provisions of Article 5 concerning the utilization of the loan for covering the cost of material, machinery and equipment, Soviet ports delivery free of charge on the basis of F.O.B. prices, the furnishing of equipment, material and machinery presented by the U.S.S.R. will be covered by an insurance policy (C.I.F.) in the ports of the U.A.R. (Egyptian Region).

The expenses for shipment and insurance will be paid separately on the basis of the actual value, in accordance with the trade and payments agreement in force between the U.A.R. (Egyptian Region) and the U.S.S.R.

The maritime transportation of the above-mentioned equipment, machinery and material will be effected in accordance with the agreement of maritime transportation concluded between the two countries on September 18, 1958.

12. — In case of litigation or contention between the competent authorities in the U.A.R. and the Soviet organisms concerning any question relating to this agreement or its execution, representatives of the Governments of the U.A.R. and the U.S.S.R. will consult together so as to come to an understanding on the subject of the above-mentioned contention or litigation.

This agreement will be in force after its ratification, on condition that this is done at the soonest possible time. It will become effective with the exchange of documents of ratification in Moscow.

AGREEMENT

concerning the economic and technical assistance accorded by the U.S.S.R. to the U.A.R., to complete the construction of the High Dam at Aswan in its final form.

August 27, 1960

The Government of the United Arab Republic and the Government of the Union of Soviet Socialist Republics in their desire to extend the friendly relations between the two countries.

And the creation of economic and technical cooperation between them on a basis of equality, non-interference in internal affairs and complete respect for the national dignity and sovereignty of each of the two countries.

And owing to the great economic, national importance of the creation of the Aswan High Dam with regard to the Government of the United Arab Republic.

And in execution of the agreements concluded in the letters exchanged on January 15 and 17, 1960, between the President of the United Arab Republic and the Premier of the Union of Soviet Socialist Republics concerning the participation of the Soviet Union in the completion of the construction of the High Dam project at Aswan.

have decided on the following :-

Article 1 — The Government of the Union of Soviet Socialist Republics inspired by the desire to assist in the economic development of the United Arab Republic and in answer to the will of the Governement of the United Arab Republic, has agreed to collaborate with the Government of the United Arab Republic in completing the final stage of the High Dam project at Aswan.

This stage includes the following work :

a) Completing the construction of the Dam in its final form with an over-all height of 111 metres from the river bed.

b) Installing a hydro-electric power station in the course of the diversion canal on the eastern bank of the river, with a capacity of 2.1 million kw.

c) Constructing an overflow channel allowing a discharge of 200 million cubic metres daily, so that the maximum level of storage waters does not exceed 182 metres.

d) Establishing two transmission lines transmitting electric power from the High Dam in Aswan to Cairo, each with a tension of 400-500 kilovolts, and a length of 900 kilometres, including three or four transformer stations. Other transmission lines will also be established with a tension of 132-220 kilovolts and approximately 1,000 kilometres long, including from 10 to 20 transformer stations.

e) Projects of irrigation and reclamation in the lands depending on the High Dam waters, whose area is approximately two million feddans, including the lands depending on the waters resulting from the first stage of the High Dam.

It should be noted that this information is preliminary and will be agreed upon by the two parties in the course of the discussions concerning the details of the design or when the need arises during the process of execution.

Article 2 — In realization of the collaboration mentioned in Article 1 of this agreement, the Government of the U.S.S.R. undertakes the following :

a) It undertakes, by means of the Soviet organisations, to draw up the complete designs, blueprints, specifications and the list of quantities, in conformity with the hydraulic circumstances and information supplied by the U.A.R. ; and when the need arises it undertakes to carry out the necessary researches and studies. Furthermore it undertakes to draw up the plans for implementing the work necessary for the completion of the High Dam in

its final form, in accordance to the agreement reached.

All these aforementioned jobs must be completed in the shortest possible time, thereby making it possible to complete the construction of the Dam at a level of 155 metres by 1967 and completing it in its final form in 1968.

b) Designing, manufacturing, supplying and installing all the sluice gates with the mechanical and electrical annexes necessary for their operation; and also supplying all the necessary spare parts.

c) Designing, manufacturing, supplying, installing, testing and operating all the equipment necessary for the hydro-electric power station and the sluice-gates necessary for it, so that the station units and sluice-gates will be completed, installed and ready for operation according to the following schedule :

First — the first three units 1967

Second — the second three units 1968

Third — the third three units 1969

Fourth — the fourth three units 1970

Also designing, manufacturing, supplying, installing and testing all the equipment necessary for the two transmission lines each with a tension of 400/500 kilovolts and 900 kilometres long, going from Aswan to Cairo (with the exception of the construction and installation of pylons for supporting the electric lines), including three or four transformer stations equipped with commutors for regulating the tension. Furthermore it will install transmission lines with a tension of 132/220 kilovolts and approximately 1,000 kilometres long, including from 10 to 12 transformer stations comprising communications and precautionary instruments and centres for distributing pressure which operate according to the system of sonic waves. All this will be undertaken according to the agreement reached by the two parties in a manner that will insure the operation of a line with a tension of 400/500 kilovolts and the lines with a tension of 132/220 kilovolts which are approximately 1,000 kilometres long in the course of 1967. As for the second line with a tension of 400/500 kilovolts it will begin operating in 1968.

Furthermore it undertakes to provide sufficient quantities of spare parts for all the above-mentioned equipment.

d) Supplying and installing the additional construction instruments necessary to complete the final stage of the High Dam project, in addition to the materials necessary for the completion of the High Dam project and which are unavailable in the United Arab Republic, according to the dates agreed upon.

e) Extending the technical assistance necessary for construction. For this purpose the required number of Soviet experts will be sent, according to the agreement reached by the two parties.

f) Extending the technical assistance necessary for training Arab technicians, in the Soviet Union or the United Arab Republic, with regard to the work connected with the High Dam project, if the Government of the United Arab Republic so desires.

g) The Soviet organisations will undertake the work requiring special experience, and whose nature and the basis on which they will be carried out will be determined in the letters exchanged between the two parties at the signing of this agreement.

h) Carrying out the necessary tests to insure the soundness of the Dam and also carrying out final tests on the sluice gates and the hydro-electric power station when the storage waters reach their maximum level, which is 182 metres. It is understood that this will be realised not later than 1975.

i) Supplying, installing and operating the mechanical and electrical equipment necessary for the irrigation and land reclamation projects mentioned in Article 1 of this agreement.

It is understood that the dates mentioned above are founded on the basis that the U.A.R. side will furnish the required information and will undertake the obligations stipulated in this agreement and all that will be agreed upon by the two parties.

Article 3 — The U.S.S.R. Government will grant the Government of the U.A.R., a loan of approximately 900 million roubles (the rouble contains 0.222168 grammes of pure gold) to cover the expenses of the Soviet organisations with regard to the designs of the project, research work, studies, and supplying and installing the sluice-gates and hydro-electric power generating units, equipment and materials according to Article 2 of this agreement on the basis of Soviet ports delivery prices (F.O.B.), and the transportation expenses of Soviet experts supplied to offer technical assistance according to this agreement, to and from the United Arab Republic.

If the total expenditure mentioned above exceeds the loan, fixed in this Article at 900 million roubles, the Government of the U.A.R. will reimburse the balance to the Government of the U.S.S.R. in the form of merchandise from the United Arab Republic, in conformity with the trade and payments agreements in force between the United Arab Republic (Egyptian Region) and the Government of the U.S.S.R.

Article 4 — The U.A.R. Government will reimburse the sums used from the loan granted to it in accordance with Article 3 of this agreement in twelve equal annuities, starting one year after the completion of the High Dam in its final form, and the implementation of the hydro-electric power station which will be ready to generate not less than 10 million kilowatts of electricity, provided that this is not done later than January 1st, 1970. As for the part of the loan which will be utilized from January 1st, 1969 to execute the remaining parts of the project, it will be reimbursed according to the same conditions of payment, one year after the execution of all these jobs, provided this is not done later than January 1st, 1972.

The rate of interest on the loan is 2.5 per cent annually. Interest is payable from the date of the utilisation of every part of the loan, and is to be paid in the course of the first three months of the year following upon the year in which they fall due. The date of the utilization of the loan with regard to equipment, instruments and materials is considered as the date of the shipping voucher. As regards the expenditures connected with the work involved in designing, research and studies, and also the expenses incurred by sending Soviet experts to the United Arab Republic, the date of the utilization of the loan is considered as the date of the bills concerning these matters.

Article 5 — Apart from the stipulations present in this agreement, the stipulations of Articles (3), (4), (7), (8), (9), (10), (11), (12) of the agreement concluded between the Union of Soviet

Socialist Republics and the U.A.R. in which the U.S.S.R. undertakes to extend technical and economic assistance with regard to the construction of the first stage of the High Dam at Aswan and which was signed on December 27, 1958, are in force. Also in force are the stipulations and conditions mentioned in the letters exchanged between the two parties on the same date as the signing of the said agreement, and will be effective as of the date of this agreement.

Article 6 — This agreement shall be ratified within the shortest time possible and are considered as an integral part of the exchange of the ratification documents in Cairo.

This agreement was written in Moscow on August 27, 1960, in two copies, one in Arabic and one in Russian, each of which has the same legal power.

Moussa ARAFA,
(representing the Government
of the United Arab Republic)

Y.F. ARKHIBOFF,
(representing the
Government of the Union of
Soviet Socialist Republics)

- INTERNATIONAL ECONOMIC NEWS, RESEARCHES, EVENTS, FEATURES, AND VIEWS, AS WELL AS EFFICIENT COMTEL SERVICE ARE NOW PRESENTED TO YOU BY « MEN » IN ARABIC AND ENGLISH ON TICKER OR IN BULLETIN.

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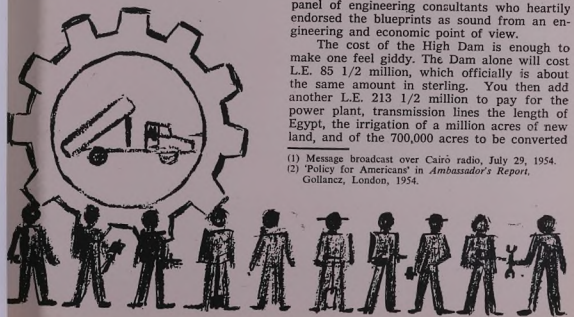
A TRIBUTE

«... Every people on earth go through two revolutions — a political revolution that helps them recover their right to self-government and freedom from alien armed forces — and a social revolution for social justice for all. For us, there was no alternative but to carry out the two revolutions together...»
Nasser (1)

«... As Afro-Asian peoples reach out to us for reassurance and understanding, will we be true to our traditions? Or, will we rebuff them with the monotonous chant, 'The Russians will get you if you don't watch out'?...»
Chester Bowles (2)



Readers of the Bible remember the story of Joseph in Egypt, when there were seven lean years and seven fat years. The lean years were those when the Nile was low, and the fat years when the river was high. From Biblical times to the twentieth century, the Nile problem has remained the same. In some years, rains are heavy in the Ethiopian highlands, and the Nile Valley is ravaged by destructive floods. The next year, there may be a shortage of rain in Ethiopia, and Egypt's crops will dry up for lack of water.

The High Dam will remedy this situation by providing perennial storage, guaranteeing a steady and adequate supply of water for every year. The present Aswan Dam provides only annual storage; its reservoir is filled and emptied each year. It is at the mercy of the annual Ethiopian rains. The High Dam will increase the cultivated land of Egypt by 33 per cent. It will provide electric power to aid the country's industrialisation. It will guarantee annual rice production and so stabilise exports. And it will provide sure flood control.

The size of the project alone was sufficient to commend it to the daring young leaders of the Egyptian Revolution. As our able engineers have often said, the High Dam, in bulk, will be seventeen times the size of the Great Pyramid. Its reservoir will be the largest man-made lake in the world. It will take about ten years to complete.

More exciting to us Egyptians is the fact that this is our first gigantic industrial project. Engineers and technicians conceived this scheme and drew up its plan step by step. The plans were then referred to an international panel of engineering consultants who heartily endorsed the blueprints as sound from an engineering and economic point of view.

The cost of the High Dam is enough to make one feel giddy. The Dam alone will cost L.E. 85 1/2 million, which officially is about the same amount in sterling. You then add another L.E. 213 1/2 million to pay for the power plant, transmission lines the length of Egypt, the irrigation of a million acres of new land, and of the 700,000 acres to be converted

(1) Message broadcast over Cairo radio, July 29, 1954.
(2) 'Policy for Americans' in *Ambassador's Report*, Gollancz, London, 1954.

from basin to perennial irrigation, and for roads in reclaimed areas. Then you pay out L.E. 20 million compensation to owners of inundated land and add up: total public investment, L.E. 319 million. Private investment in the new land will be about L.E. 96 million.

Staggered by this appalling grand total, we regain our sense of proportion by realising that L.E. 415 million would cover the cost of only a quite modest war — an exercise for which almost any country in the world is readily able to produce the finance.

Besides, this Dam is certain to pay off when it is completed, while modern wars seldom bring in much to either side. Our experts estimate that improved agriculture and industrialisation will immediately bring an annual L.E. 22 million direct to the government in taxes on new land and economies in repair to dykes, and so on, and that an annual L.E. 234 million will be added to the national income by increased cultivation, constant water, flood protection, improved navigation and electric power. This means that the project will amortise itself in its first two or three years of operation.

In view of the magnitude of the project, we could not finance the construction of the High Dam with our limited resources. We therefore sought aid from the Western countries, considering that we have always had dealings with them for the past century or so. Protracted negotiations took place, and at last the United States and Britain, together with the World Bank, announced that they would grant us 270 million dollars, spread between themselves.

However, in view of political considerations, the two Western countries suddenly decided to withdraw their loan offers, and, in fact, urged the World Bank to follow suit.

There was no alternative before us but to nationalise the Suez Canal Company in order to try and begin financing the High Dam project.

In the face of this, the United States and Britain and, naturally France, began a series of economic sanctions against us. All Egyptian funds deposited with the banks in those countries were frozen, and a concerted economic embargo imposed on us. This was followed by the brutal aggression against our country by Britain, France and, this time, Israel, the Western-sponsored Zionist State implanted in the very heart of the Arab world.

Back in Aswan near the site of the projected High Dam there was another kind of sabotage on the part of a Western country. A French contracting firm (Les Grands Travaux de Marseille) was engaged to build a hydro-electric dam near the existing Aswan Dam (built 1902). Originally, it was assumed t turbines would be attached to the Aswan D but it was found that the vibration of the bines might damage the dam, and in the the contractors decided to build a comple new dam on the edge of the reservoir less t a mile from the old dam. A coffer-dam was built to hold back the water while a rock and masonry dam was built. In from the new dam, a little lake was excavated. massive tunnels were drilled through the ro hills nearby to take the water back to the after it flows through the turbines.

Only a few miles away from this proj another French firm (L'Air Liquide) was wo ing on the construction of a chemical fertil plant whose production largely depended u the electric energy expected to be produced the nearby hydro-electric station.

With the nationalisation of the Suez C Company, relations became severely stra between Egypt and France. French pilots technicians left the Canal and, almost unm ed, the French contractors and engineers the Aswan hydro-electric and fertilizer pl « The French », remarked one Egyptian e neer at the former project, « thought tha leaving us, they would block our project. T thought we would have to wait for their re before we could complete this scheme. But went ahead with the work alone. For mo there were no foreigners here at all to help and no time was lost at all ».

In mid-1957, however, a West German was brought in to replace the French con tors. Turbines and other equipment brought from Germany, Switzerland, and S den, and technicians from those countries c to install them. But in Aswan, a little gr of Egyptian engineers will never forget they were able to carry on alone during dark days of the Suez crisis.

Appreciating Egypt's dire need for High Dam project, the Soviet Union expre its readiness to offer us aid to this end. December 27, 1958, an agreement was co quently initialled in Cairo between the countries, under which the Soviet Union u took to offer economic and technical aid t for building the first stage of the High D

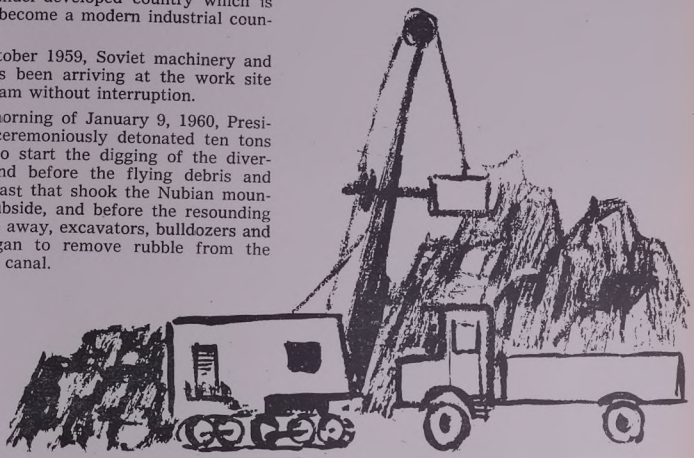
In February 1959, following the full ra ation of this agreement, the Soviet Governm began to fulfil its obligations. Pre Khrushchev announced, at the reception a in honour of UAR Vice-President Marshal A Hakim Amer, who was visiting the S Union at the invitation of the Soviet Go ment, that the latter had agreed to partic in the construction of the High Dam, prom in this by the cordial relations existing bet

the Soviet Union and the United Arab Republic. In fact, the Soviet Premier's statement aroused at the time a good deal of speculation and comment in the world, and in Western circles in particular.

The **Associated Press,** in a commentary, admitted that « Khrushchev's statement is a turning point in the history of the awakening African Continent. For Russia now appears, in the eyes of the millions of peoples of under-developed countries, as a country which helps a poor and under-developed country which is struggling to become a modern industrial country ».

Since October 1959, Soviet machinery and equipment has been arriving at the work site of the High Dam without interruption.

On the morning of January 9, 1960, President Nasser ceremoniously detonated ten tons of dynamite to start the digging of the diversion canal, and before the flying debris and dust of the blast that shook the Nubian mountains could subside, and before the resounding echo could die away, excavators, bulldozers and tip-lorries began to remove rubble from the course of the canal.



On January 10, i.e., the following day, the UAR press carried the celebrations commemorating the beginning of the work on the first stage of the High Dam, under banner headlines. « WE ARE BUILDING THE HIGH DAM AT LAST », read « Al-Ahram », Cairo daily. « Nasser says : 'The High Dam is a symbol of the resolution of the entire Arab nation to proceed with the building of its great liberated homeland...' ».

One week later, the Soviet Union agreed to participate also in the second and final stage of the project. In a letter to President Nasser, the Soviet Prime Minister wrote : « We, the Soviet people, look upon, with profound cordiality and understanding, the efforts which the people of the United Arab Republic are exerting for the purpose of developing their national economy and raising their standard of living. We whole-heartedly wish your people every success in realising this noble task. The day has come for the construction of the High Dam — a dream of many generations of Egyptians — to play a valuable role in realising this objective ».

We cannot conclude this article without reproducing an extract from President Nasser's speech delivered in Aswan on January 9, 1963, on the third anniversary of starting work on the High Dam, in which he paid homage to the Soviet Union for the valuable aid which it has not ceased to offer to us, and which may be considered a tribute paid by the Head of the UAR in the name of the whole nation. He said, among other things : « When speaking of our efforts, we must not ignore the efforts of others. We thank the Soviet Union for the great assistance it has offered to us. We thank Mr. Khrushchev for having granted us a generous loan for the first stage and a further loan of L.E. 100 million for the second. I thank, likewise, the Soviet technicians and workers who are working with us under more than 50 degrees of heat, when they are accustomed to live below 50 degrees in their own country ».

Addressing the UAR's newly-elected National Assembly last month, President Nasser paid tribute to the Soviet Union for helping us realise this project, by saying : «... It is fortunate that a dear friend of this people and a representative of a dear friendly people, will attend this celebration (completion of the first stage). I mean Mr. Nikita Khrushchev, the Prime Minister of the Soviet Union ».

AN ACHIEVEMENT BY UAR CONTRACTORS

Now that the first stage of the L.E. 415 million High Dam project has been completed successfully, and ahead of schedule, it is appropriate to mention here the name of Egyptian contractors who have helped to realise this dream project.

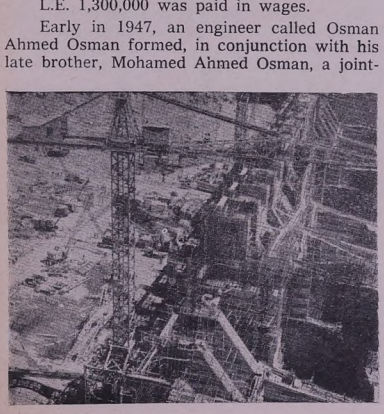
In view of the magnitude of the High Dam project, and the fact that this was the first undertaking of its kind in our country, the UAR Government decided to entrust the major jobs of the first stage to local contractors, with the dual object of saving the high costs involved in importing foreign contractors and labour, and offering local contractors the opportunity of gaining experience in a new field.

A quick glimpse at the jobs carried out by THE ARAB CONTRACTORS (Osman Ahmed Osman & Co.), in less than eighteen months (April 1961—September 1962) will give an idea of the efficiency and ability of these men :

- 4,630,000 cubic metres were dug, dynamited and transported.
- 1,350,000 kilogrammes of explosives were used.
- 140,000 metres of drilling was done before dynamiting.
- 1,100,000 kilometres were covered by the 25-ton lorries during the removal of rubble.
- 8,000 workers were employed.
- 500 administrative and technical employees were employed.
- 60 engineers were employed.
- 64,000 hours were actually worked (24 hours/day).

L.E. 1,300,000 was paid in wages.

Early in 1947, an engineer called Osman Ahmed Osman formed, in conjunction with his late brother, Mohamed Ahmed Osman, a joint-stock company by the name « OSMAN AHMED OSMAN & Co. — ENGINEERS AND CONTRACTORS », its aims being to undertake engineering contract jobs.



In 1955 it was decided, following the expansion of the activities of the company, to convert it into a limited-liability firm. A Republican Decree was issued on March 1, 1955, establishing « THE INDUSTRIAL & GENERAL ENTERPRISES ENGINEERING COMPANY, S.A.E. (Osman Ahmed Osman & Co.) » with fully paid capital of L.E. 160,000, distributed in 40,000 shares at L.E. 4 a share.

The company's activities extended beyond the United Arab Republic ; its experts provided technical assistance to, and supervised jobs carried out by, the Saudi Contracting Company ; these included the construction of military barracks, hospitals, aerodromes and academies, etc. The company also gave similar aid to the Kuwaiti Engineering Company which was responsible for the construction of the largest and most modern building in Kuwait, namely, the Municipality House, which is the official residence of the government and the Constituent Assembly.

In Libya, the company is presently co-operating technically with the General Libyan Company for Enterprises and Development, thereby contributing to the development of that country.

By virtue of a Republican Decree issued on March 24, 1964, the company's name was changed to « THE ARAB CONTRACTORS (Osman Ahmed Osman & Co.) ». The decree authorized the new firm to deal with foreign firms and to undertake contract work outside the UAR, granting it also many facilities by which it is exempted from the restrictions imposed by the rules and regulations governing the General Sector organizations, a matter which has enabled the ARAB CONTRACTORS to widen the scope of their activities on a larger scale.

In the United Arab Republic, the company is carrying out, beside its commitments with the High Dam project, the following jobs :

- — Widening and deepening the Suez Canal.
- — Improving the harbour of Port Said.
- — Constructing Cairo International Airport and runways.
- — Building the new Port Said dockyard.
- — Constructing the port of Abu-Zenima on the Red Sea, as well as a ferromanganese plant there.

It is fitting to state here that during the execution of all jobs at the High Dam, the Soviet experts who are engaged on the project have highly commended the full co-operation and efficiency of the ARAB CONTRACTORS.

A RACE AGAINST TIME

The entire world has talked about the miracle of the High Dam, but this awe-inspiring work is beyond words ; the realisation of the miracle defies description ; it is more eloquent than any oration.

The first stage of the project was to be completed by the end of 1964 or early in 1965 at the latest. But thanks to the close cooperation between the Arab and Soviet personnel engaged on the work of the High Dam, it was possible to complete it seven months earlier, **i.e.,** early this month.

The volume of reinforced concrete required for the construction of the High Dam alone amounted to half a million cubic metres. The Misr Concrete Development Company was responsible for this gigantic operation. Eight thousand workers, working eight-hour shifts, day and night, buckled to the pouring of reinforced concrete, at a monthly average rate of 60,000 cubic metres.

This operation was sub-divided into several stages, namely :

a) The breaking of granite rock dug from the tunnels of the High Dam, by means of crushers with a production capacity of 3,000 cubic metres.

b) The sorting of rubble according to size with the help of mechanical equipment, and depositing it in special dumps.

c) The manufacture of concrete in various forms, with the use of crushed granite, according to the plan of concrete mixture, by adding to it sand, cement and S.S.B. material, in given proportions, so as to delay the duration of the setting period. This operation is automatic ; the machines produce each component of concrete in given quantities.

The concrete mixing plant, the largest of its kind in the Middle East, comprises six production units, which originally were intended to produce 1,000 cubic metres of reinforced concrete per day. But the exigencies of the work required the raising of the daily production capacity to 2,850 cubic metres.

d) The transportation of concrete with the help of « club lorries », from the mixing plant to the sites where it is to be used.

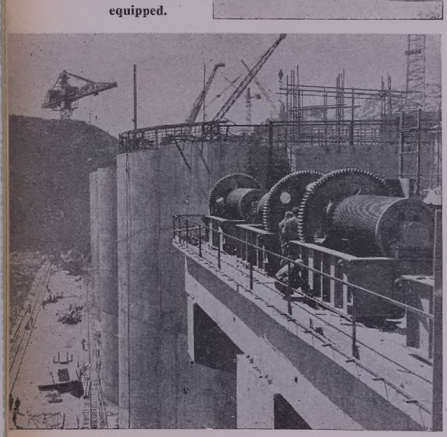
Inlets of Tunnels :

The Misr Concrete Development Company has also undertaken the construction of the inlets of the tunnels, firstly by preparing the wooden « forms », then installing them in fixed localities, after having inserted the mild steel bars therein. This is followed by the pouring of concrete into the forms, destined to support the tunnels.

Power Station :

The Misr Concrete Development Company undertook at the same time the pouring of the concrete for the construction of the hydro-electric station, the foundations of which go down as far as 35 metres below the bed of the Nile, and rise to nearly 40 metres above the river

The installation of levelling flood-gates in which each of the six tunnels will be equipped.



bed i.e., a total height of 75 metres, equal to more than half the height of the Great Pyramid.

The construction of this station calls for the pouring of half a million cubic metres of reinforced concrete, one half of which was poured before the end of the first stage of the Dam project.

Equipment :

The mechanical equipment used by the Misr Concrete Development Company in undertaking this gigantic work, consists of the following :

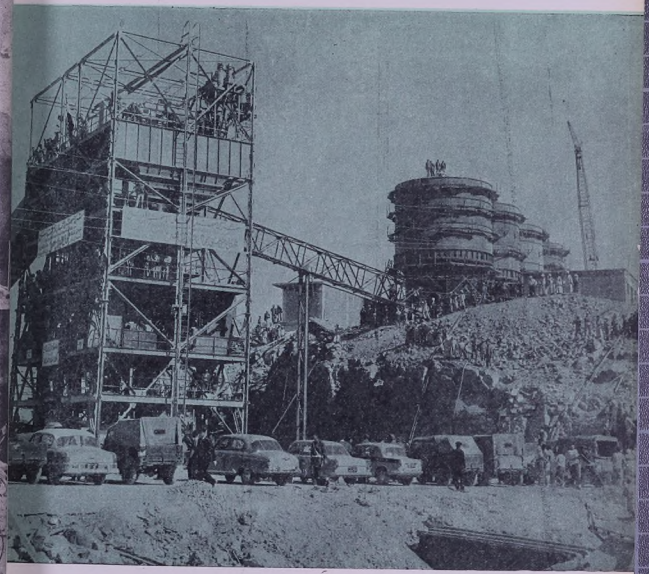
- — Large mixer for reinforced concrete, six units.
- — Small mixer for reinforced concrete, four units.
- — A water-cooling station.
- — Twenty large rock-crushers, fully equipped.
- — An overhead crane of 20 tons capacity.
- — Five rotating cranes of 20 tons capacity.
- — Ten mobile cranes, « Caterpillar », of 10 tons capacity.
- — Six tractors for the transport of « club » lorries ».
- — Six crushers for concrete, with a 40-metre-hour capacity.
- — Ten air compressors.
- — Twenty water pumps of varying capacity.
- — Forty large electric transformers.
- — Two hundred and fifty electric wobblers for stirring the concrete during the pouring process.
- — One hundred and five « club » lorries for transportation.
- — Three tank waggons for watering.
- — Twenty bulldozers.
- — Five tractors for transporting equipment.

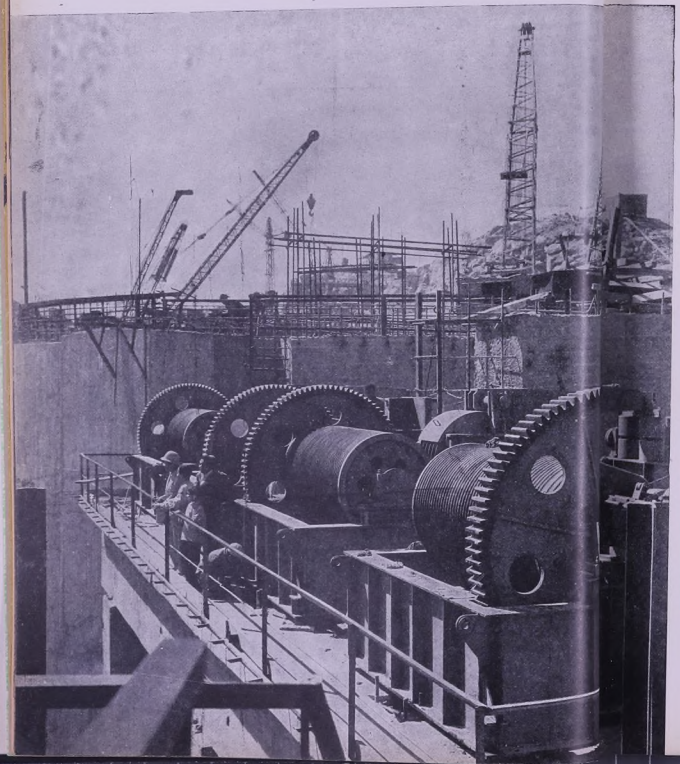
A big mechanical workshop was built for the maintenance and repair of this mechanical equipment, while a mobile workshop did service at the sites of work.

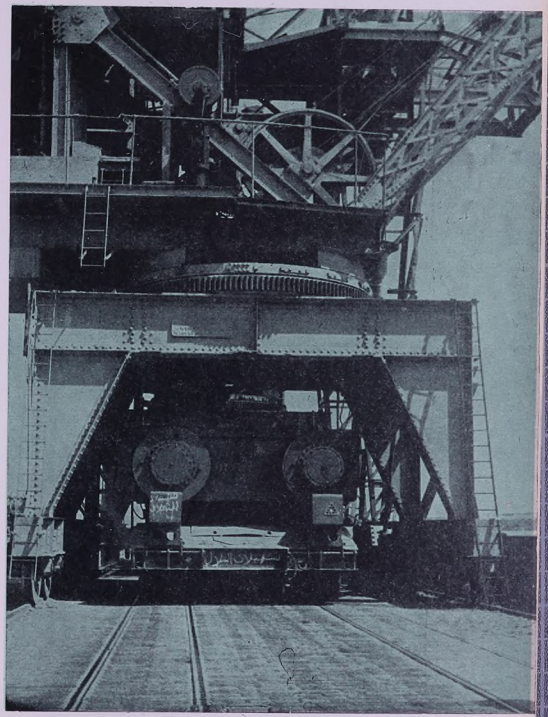
The gigantic work accomplished by the Misr Concrete Development Company in the construction of the High Dam aims at permitting the Arabs to recover their right to build their own country and enjoy the benefit of their own resources.

(right) Soviet and Egyptian experts discussing a problem.

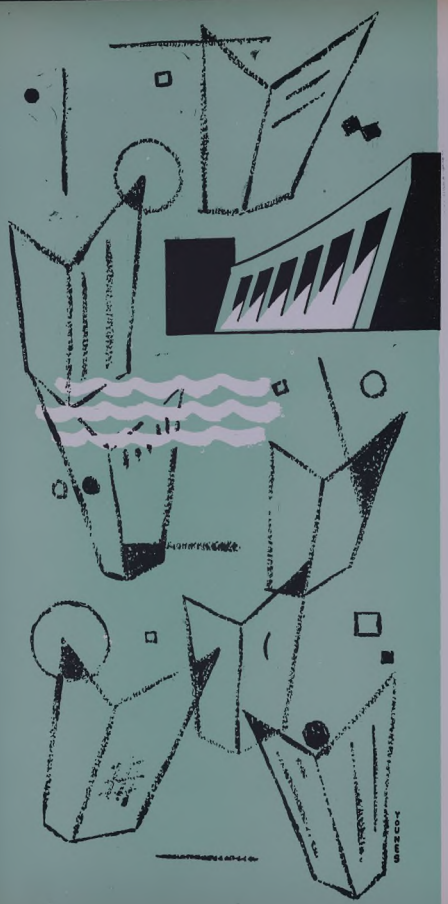
The giant concrete mixers belonging to Misr Company for Concrete Works.







The installation of levelling flood-gates into the tunnels.



World Public Opinion

THE HIGH DAM - FOR and AGAINST

«If I were to rule this country (Egypt), not one drop of water of the Nile would reach the sea !»

Napoleon (1)

« ...The regular supply of water by the Great River... is to Egypt, not a question of convenience and prosperity, but actually of life ».

Viscount Milner (2)

« ...I am now thoroughly convinced that the High Dam project, when completed, will be one of the wonders of the modern world. It really impressed me as miraculous ».

Richard Nixon,
former U.S. Vice-President (3)

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(1) Speaking to his aide Desaix, during an inspection tour of Mansourah, Egypt. cf. **Le Roi Saud** ou l'Orient à l'heure des relèves, Benoist-Méchin, Paris, 1960, p. 318.

(2) cf. **England in Egypt**, London, 1920.

(3) At a press conference in Cairo on June 23, 1963.

Egypt, a century ago, was comfortably populated when its population was ten million, although there is no doubt that the Turks, rich landlords and economic colonialism kept the ten million hungrier than they need have been. But by 1947 there were nineteen million Egyptians. In 1960 there were about twenty-five million. By 1970 there will be more than thirty million in this long, very narrow land of Egypt. Even though now free of Turks, landlords and imperialists, Egypt cannot feed her multitudes with the soil and water available.

There were two answers to this arithmetic. Either the twenty-five million population must decline to, say, fifteen million, or the 130 milliard cubic metres of water that runs wasted into the sea at flood-time must be conserved to grow food and to provide power for the industries of the increasing population. The first solution is impossible of attainment. Thus Egypt was left with only one solution — the HIGH DAM.

However, in 1956, when we tried to seek loans to finance the first stage of this huge project, we did not succeed. Certain powers went so far as to exert their influence on the World Bank to prevent it from granting us a loan for the project. Egypt declared her readiness to accept loans on reasonable conditions that respect her sovereignty and independence.

In October 1958 we received an offer from the Soviet Union of participation, technical and financial, in building the first stage of the High Dam, and an agreement was subsequently signed between the two countries. Work on the giant project was thus officially started on January 9, 1960.

On August 27, 1960 (eight months later), the Soviet Union agreed to underwrite the entire High Dam programme.

By this time, much had been said and written about this mammoth project; how this dream became a reality; why the United States and Britain made and then withdraw their offers; how they exerted pressure on the World Bank to prevent it from making its previously approved loan; etc.

We shall not attempt here to discuss the circumstances under which work on this outsize project was begun when President Gamal Abdel Nasser detonated ten tons of dynamite on January 9, 1960, to start the digging of the diversion canal. Nor is it our intention to reply to the mischief-makers and the malicious reports and rumours which have found their way into the British and American press.

It is our intention, now that the River Nile has actually been diverted through the canal, early this month, to publish here excerpts from some of the reports which appeared at the time in the Western Press attacking the High Dam project and belittling our efforts to improve our lot. At the same time we publish the unbiased opinions of some Western writers who had occasion to visit the United Arab Republic and the site of the High Dam and report their impressions. The latter themselves provide the reply to the former.

To the group of mischief-makers, we would have welcomed their visit to the High Dam site so that they could see for themselves whether it was really worth the trouble after all; to the latter group of friends who wished the people of the UAR and their High Dam life, prosperity and health, we are deeply grateful.

— EDITOR

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E.V. LAWRENCE, American writer and educator, in his book «EGYPT AND THE WEST», (American Institute of International Information, New York) Sep. 1956.

— DID WITHDRAWAL OF UNITED STATES — BRITISH SUPPORT FROM THE ASWAN DAM CAUSE SUEZ CANAL NATIONALISATION ?

On July 19, 1956, the United States, followed by the British, withdrew their joint $ 70 million grant toward the building of the $ 1,350,000,000 Aswan Dam. This brought about the withdrawal of a $ 200 million five-year loan by the International Bank for Reconstruction and Development (IBRD) which had been conditional on this grant.

These acts elicited Nasser's angry denunciation on July 26 of the West and Israel, coupled with the seizure of the Suez Canal Company and the announcement that its revenues would be used by Egypt to carry out the construction of the dam on its own.

Justifying this act, the Arab Information Centre in New York said :

> **«Faced with the possible choice between Russian economic assistance and nationalisation of the Suez Canal in order to secure funds for the building of the High Dam at Aswan, Egypt has elected the latter alternative.»**

The facts contradict both allegations. For Nasser the Aswan debacle provided the pretext to carry out an intention under consideration by him for two years and a half as he, himself, publicly admitted on August 12. Clearly there was never any intention of waiting until the concession of the Universal Maritime Canal Zone Company expired in 1968 before Egypt took possession.

— WOULD SUEZ CANAL REVENUES PROVIDE EGYPT WITH THE FUNDS TO BUILD ASWAN DAM ?

If traffic through the Suez Canal were maintained at the level before nationalisation, over a period of years, its revenues might barely provide Egypt with sufficient foreign

currency to build the $ 1,350,000,000 Aswan Dam if there were no liens on profits, and if the economy of the country could provide the additional $ 550,000,000 in local currency required.

In 1954, the income of the Canal was $ 92,730,574. The net income after expenses was $ 44,553,747. In that year the tolls of the Canal were reduced for the 27th time based on an increase in traffic. In 1955, the Company's gross was $ 97,596,000; its net $ 45 million.

Assuming the present level of traffic were maintained. part of the income would have to be plowed back for canal improvements. The Universal Canal Company has been spending about $ 8 million a year on such improvements. In 1954, it launched a five-year $ 54 million expansion programme to increase the maximum draft of vessels from 35 to 36 feet and to enlarge the capacity of the canal from 40 to 50 ships daily. This programme would have to be continued to service the Canal.

Four hundred million dollars are needed to build the Aswan Dam, Eugene R. Black, President of the International Bank of Reconstruction and Development states, this apart from $550,000,000 needed in Egyptian currency for local labour, services and materials, in addition to $ 400,000,000, to be invested by private investors. According to the IBRD president, it will take 15 to 18 years to build the Dam.

There are two liens on canal profits, one to improve the Canal — and another to pay back the shareholders of the nationalized company, some $ 233,000,000, which Nasser has offered to do. This must come out of Canal profits, since to use existing sterling balances would be a ruinous depletion of his meagre foreign reserves.

— HOW VITAL IS THE ASWAN DAM TO EGYPT'S PEOPLE ?

That the $ 1,350,000,000 Aswan Dam would ever have been completed; that the Nasser regime could have maintained 15 years of financial austerity, indispensable to its financing — or that it would have appreciably raised the standard of living of Egypt's 23,000,000 people, even if they could wait ten to fifteen years to get its benefits, is becoming more and more doubtful as new facts come to light.

In blueprint, the Dam is technically and economically feasible. Actually the Dam, scheduled to be the largest in the world, was conceived and fostered in political terms. By Nasser as a colossal monument, rivalling the Pyramids, to himself and his Revolution. By the United States as a gigantic lure to beguile Nasser into ending his arms infatuation with the Russians and accepting a Western embrace.

The first stunned U.S. reaction to Nasser's arms deal with the Russians in September 1955 was to rush George Allen to Egypt to offer him arms at any price. When it was clear that Nasser would not renounce the arms deal with the Russians, State Department wooing consisted of crushing its own doubts concerning Aswan, its offer to Nasser of funds for the Dam; and at the same time a new courtship of Egyptian friendship by refusing to permit Israel to buy defence arms from the U.S. to balance Nasser's new arms preponderance.

The offer of funds for Aswan negated an earlier decision made known to the House Appropriations Committee that the U.S. would not finance the Dam. The offer was made despite Egypt's active organisation of Saudi Arabian and Syrian opposition to the Baghdad Pact, which the U.S. had authored.

The Aswan Dam had been under discussion with the International Bank for Reconstruction and Development for two years, without any decision, when U.S. urgency pushed forward the combined offer on December 17, 1955 of a U.S.-Britain grant of $ 70,000,000 and a ten year loan of $ 200,000,000 at 5 per cent interest by the Bank, the largest in the Bank's history.

Egyptian reports of Russian offers of help at lower rates of interest than the Bank stimulated the urgency of State Department thinking.

PEOPLE ON BORDER OF STARVATION

How desperate is the need for raising the standard of living of the Egyptian population of 23 millions, may be gauged by Nasser's own admission on August 28, 1956 that 80 per cent are «on the border of starvation.» Further he said in an interview with Barrett McGurn, in the «Herald Tribune» of August 29, 1956, «$5.60 a month is the average income; 80 per cent eat only bread, milk, cheese, and meat once a week or once a month.»

EGYPTIAN CLAIMS FOR THE DAM

Egyptian claims for the Dam are that it would resolve Egypt's problems by increasing the cultivable area by more than 30 per cent; the electric supply by eight-fold; the national income by one-third.

BANK URGES FINANCIAL AUSTERITY

In 1954-1955 IBRD experts spent five months in Egypt making a detailed study. In January 1956 the President of the Bank visited Egypt at Nasser's invitation.

> **In February after his return Eugene Black, president of the Bank, made clear that he regarded the project feasible technically and economically, provided : «Egypt would regulate its economy in such a way as to avoid bringing the project and indeed the economy of Egypt itself into jeopardy.» The cost he said «would be $ 1,350,000,000 of which some $ 400 million represents private investment. Our discussions centered on the balance — $ 950 million — which will take the form of government expenditures. In line with the Bank's usual practice, the Egyptian Government will take the responsibility for $ 550 million needed in Egyptian currency for local labour, services, and materials. That leaves $ 400 million needed in other currencies for equipment and services that will have to come from abroad.**

«I felt that of this amount the Bank could lend half, or $ 200 million but that it would be necessary for the Egyptian Government to find elsewhere the remainder of the foreign exchange needed. Before I went to Cairo, the American and British Governments had offered grant funds of $ 70 million... The two governments also indicated that they would be prepared at a later date, in the light of the then existing circumstances, to give sympathetic consideration to financing the later stages of the project, as a supplement to Bank lending.»

A condition sine qua non was there should be agreement between Egypt and the Sudan on the division of the waters of the Nile — a condition which has never been met.

DOUBTS EXPRESSED THAT IT WILL RESOLVE EGYPT'S PROBLEMS

Simultaneously, with the announcement of this project, considerable doubts were expressed concerning its value in resolving the basic needs of a country, which are, lebensraum, birth-control and industrialisation, apart from increasing cultivable areas.

The increase in the cultivable land it was pointed out would only about keep pace with the population increase of about 750,000 per year which is expected to double within 35 years.

Further it was pointed out that the first elements in the construction of the Dam would require 10 years. That it would be at least five years before any benefits would be visible and 15 years before the full value of the Dam would accrue to the country.

BANK SEES PRIMARY PURPOSE TO PREVENT DROP IN LIVING STANDARD

The Bank itself, in a memorandum dated December 16, 1955, made it clear that it considered the undertaking a major holding operation, not to insure a «significant per capita rise in the current standard of living,» but rather «to prevent a disastrous deterioration in this standard.»

In the Bank's view when completed, the Dam will give the country a breathing spell that will provide the opportunity for broadening the industrial base of the country. But industrialisation itself would lag behind and it «seems probable over the next decade or two the overall expansion of manufacturing industries will take place at a considerably lower rate than in the past 15 years.»

WHY DID THE UNITED STATES MAKE AND THEN WITHDRAW ITS OFFER ON THE ASWAN DAM ?

The United States-British offer of December 17, 1955 to help finance the construction of the $1,350,000,000 Aswan Dam was a gesture by both countries to offset the effect of Nasser's 1955 arms deal with the Russians and thereby to restore waning Western prestige as well as to stalemate further Russian penetration of the Arab world.

It was spurred moreover by lengthy and recurrent dispatches from Cairo, quoting Egyptian officials to the effect that the USSR, in addition to supplying Egypt with arms, was also prepared to lend Nasser the money for the Dam at interest rates considerably lower than those proposed by the International Bank for Reconstruction and Development or to make him an outright grant.

In such haste were the two powers to prevent this development, that their offer was made to Egypt even before the latter had reached an agreement with the Sudan on the division of the Nile Waters and even before the IBRD had finalised its negotiations.

These were the factors overriding the considerable doubts that the Aswan Dam was the most effective means of raising the standard of living of the Egyptian people or that Egypt was capable of maintaining its own end of the heavy financial obligation involved.

The combined U.S.-British-International Bank offer was made in December 1955. It was not until July 1956 that the Egyptians decided to accept. In the interval between December and July, Egypt enlarged its arms deals with the Soviets, expanded and consolidated its trade, social and cultural relations with the entire Communist bloc, recognised Communist China.

What in 1955 was assumed to be an $ 80,000,000 arms deal, assumed the proportions of $ 250,000,000 and more, to the payment of which current and future cotton crops were pledged. The military build-up has assumed such proportions, that today it is estimated that Egypt is spending more than 31 per cent of its budget on militarisation, under the title of «defence.»

Moreover, Egypt's neutralism changed to a close relationship with the Communists, climaxed in May by Egypt's recognition of Communist China. Egypt's lead was followed by Syria and Yemen with significant repercussions in Lebanon, Jordan and elsewhere.

Soviet leaders from Foreign Minister Shepilov down, have been the honoured guests of Egypt, Syria and Lebanon in addition to a constant parade of trade missions and technicians, buttressed by a series of cultural exchanges between the Communist Bloc and the Arab States.

During this period Egyptian-Saudi Arabian pressure on Jordan produced the riotous Jordanian refusal to join the Baghdad Pact followed by the ouster of Brigadier-General John Glubb Pasha as the Commander of the British financed Arab Legion and a consequent weakening of Britain's position in that country.

It also produced a spate of propaganda in public praise of the USSR and an unceasing barrage against the United States, Britain and France as imperialists.

This attack was mounted by the Egyptian Government as leverage in the hope of forcing assurance from the U.S. and Britain that the entire sum of $200,000,000 needed to supplement the Bank's loan of $200,000,000 would be advanced by the two countries. This despite a United States warning that the $56 million (of the $70,000,000 U.S.-British joint offer) could not be held beyond June 30, the

nd of the fiscal year, and the inability of the United States o make fixed appropriations for more than one year.

On July 17, seven months after the offer had been nade, the Egyptian Ambassador returned to Washington o accept it. But a day earlier, the Senate Appropriations ommittee passed a resolution enjoining the Secretary of tate from obligating any Mutual Security Funds to the swan Dam.

When on July 19 the State Department publicly with- rew its offer it had become certain of the gigantic hoax hich the Egyptians had perpetrated and that there were in act no Russian offers to finance the Dam.

BRD UNEASY ABOUT DAM

Since the withdrawal of support, the profound un- ase of the IBRD in undertaking the project has become nown, supported by the most recent statistics concerning he precarious state of Egypt's economy, aggravated by its eavy commitments to the purchase of arms and its rising xports to the Soviet Bloc, with its consequent loss of for- ign currency imperative for the purchase of staples absol- tely indispensable to maintaining the country's economy.

In a memorandum prepared by the IBRD on August 0, 1955, the Bank related the feasibility of carrying through he Aswan Dam project to an austere financial discipline y Egypt and was sceptical about the current financial ractices.

It wrote :

«In its desire to move ahead on all fronts the government has adopted a rather pell-mell approach to development with little consideration of the financial resources likely to be available in the long run.»

GYPTIANS WOULD NOT BENEFIT OR 10 OR 15 YEARS

Pointing out that principal elements of the Dam would ike 10 years to construct, «with full benefits not realised or another 5 or more years,» the memorandum says:

«The Bank has considered whether under the circumstances it is within the capacity of Egypt to finance the Sadd el Aali project. Even taking into consideration its ability to borrow abroad, Egypt will have to mobilise very large amounts of money from its own resources throughout the construction period. It should be able to mobilise the necessary funds at home and abroad, but only if it adopts sound methods of financing the project and rigorously adheres to sound fiscal and economic projects.»

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EITH WHEELOCK, an American writer who visited Egypt four times between 1953 and 1957. He delivered numerous lectures, and appeared on radio and television programmes about Egypt.

(From his book NASSER'S NEW EGYPT — A Critical Analysis, New York, 1960)

There were (other) indications that Anglo-American enthusiasm for the High Dam project was on the wane. Senator Walter F. George, Chairman of the Senate Foreign Relations Committee, took strong exception to the administration's indirect request for authority to grant a long-term commitment on the Aswan High Dam. Moreover, Dulles publicly indicated his annoyance at Egypt's diplomatic recognition of Communist China. The changing climate of opinion was also reflected in an American announcement that funds earmarked for the High Dam no longer were being held, and that a new Congressional appropriation most probably would be required.

American opposition to the High Dam project grew on a number of grounds. There was general annoyance at Nasser's game of «economic neutralism,» which pitted Western offers against those of the East; Congress never was keen on supporting Sadd el- Aali; the pro-Zionist lobby vigorously opposed such a move, and a Southern group feared that the scheme would increase Egyptian cotton production. The Senate Appropriations Committee went so far as to order the Administration to spend no Mutual Security funds on the High Dam.

The United States' willingness to participate in financing Sadd el-Aali had generally been interpreted as a move to give political backing to Egypt. Nasser's brand of «positive neutrality,» however, was proving increasingly distateful to Western interests, as he assisted the Algerian rebels, attacked the West's position in the Arab world «in the name of Arab nationalism,» and flirted with the Communist bloc. Egypt's recognition of Communist China was considered by Dulles as proof of the anti-Western direction of Nasser's policies. Moreover, the prospect of financial assistance for Nasser had drawn strong protests from America's staunch allies, especially, Turkey, Pakistan, Iran and Ethiopia.

By mid-1956, influential voices in the United States rose against American policy vis-à-vis «neutrals.» Tito, with his on-again-off-again philanderings with the Soviet camp, had obtained nearly a billion dollars from the United States; similarly, Nehru, despite his moral censure of the West, had drawn heavily on American aid grants. But the neutralism of neither Tito nor Nehru could be considered aggressively anti-Western; the same did not apply to Nasser's «positive neutrality.» Moreover, American policy makers were growing restive under what seemed to have become a generally accepted game of uncommitted nations : the threat to turn to the Communists if the U.S. refused to meet their manifold, and often unreasonable, demands. As a member of the British Parliament observed: «This policy of outbidding Russia puts a premium on the local governments in the various so-called underdeveloped areas to invent special departments for thinking up fantastic schemes.»

If Dulles had so desired, the American offer to Egypt could have been pigeon-holed in accordance with acceptable diplomatic procedure; after Congress refused to provide funds for the High Dam project, the entire issue could

have been quietly dropped. Instead, Dulles chose a deliberate rebuff which carried its «own built-in moral for neutrals.» The Secretary of State firmly believed that the Soviet Union was not in a position to make good her alleged economic offers to Egypt. Moreover, he wished to scotch any attempt at economic blackmail. He later posed the question: «Do nations which play both sides get better treatment than nations which are stalwart and work with us?» His withdrawal of America's High Dam offer was a dramatic attempt to undercut President Nasser's prestige in the Afro-Asian world; it was also a warning directed to other would-be neutrals. As a bold diplomatic riposte designed to check a deteriorating political situation, it had much in its favour.

Yet, there is no question that the World Bank's position on the High Dam project had been scrupulously proper. The Bank determined the minimum guarantees necessary to protect its proposed investment, then refused to abandon its conservative banking principles. Perhaps, if President Nasser sincerely believed that the High Dam was imperative for his country's future well-being, Egypt would have acceded to the Bank's requests. Many observers, however. including prominent Egyptians, voiced the feeling that Nasser, while presenting the Hig Dam as the focus of his image of a «new Egypt,» was unwilling to make the necessary sacrifices. Certainly this impression was strengthened by Egypt's increased internal commitments and her growing involvements in the Arab world. Assuming this to be the case, Dulles' decision was a wise one, for if Egypt would be unable to support the internal costs of the High Dam, the entire project would redound to the West's detriment. There is so question that the United States had compelling economic and political reasons for withdrawal of its original High Dam offer. As President Eisenhower observed: «The conditions that had prevailed at the time the offer was made no longer prevailed.»

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JOHN ROBINSON BEAL, American journalist, writing in his book «John Foster Dulles, a Biography», New York 1957, p. 257.

«...But the spectacle of Nasser, seemingly more and more pro-Communist apparently about to win U.S. help on one project almost as costly by itself as America's entire world economic expenditures for 1956, began to have an effect on friends as well as neutrals. Stout allies like the Philippines and Pakistan began to ask themselves whether it was worth-while to take sides in the world struggle if by holding aloof the reward was help from both camps. Nasser was making it look as though the United States could be played for a sucker. When the State Department, growing more and more suspicious of his intentions, authorised France to divert some Mystère jet fighters from NATO production for delivery to Israel, Nasser responded by withdrawing Egypt's diplomatic recognition of Formosa and recognising Communist China. It was a move without any economic or other substantive motive for Egypt, and Dulles interpreted it as a petulent one revealing how far Nasser had departed from his original objective of rebuilding his country for his people's benefit.

The Middle East's hot war flared periodically and subsided as U.N. truce machinery tried to keep border incidents under control, but its cold-war tension mounted steadily toward a grand climax. Nasser was a problem child not only because we wanted his friendship but because national independence was in the U.S. tradition, a bond of sympathy which caused us to strain our basic ties with such colonial powers as England and France when emergent independence clashed with their colonial interests. America was pulled in both directions. It was the basic dilemma of the Middle East : how to reconcile our tradition of kinship with the longing for national independence with the hard fact that we had to retain our special relationship with our proved friends, who mean more to us than neutrals.

On the Aswan Dam issue Britain, despite her annoyance with Nasser, was still willing to take part in the project. The assumption had grown that Egypt did not want Western help on the dam and would turn to Russia. The new Soviet Foreign Minister, Dmitri Shepilov, had visited Cairo. United States intelligence reports conflicted on what offers he had made, but Russia had never denied the Egyptian announcement of a loan offer. Furthermore Nasser's change of mind about speed on the project, and his raising of objections about the conditions, all pointed in the same direction.

For Dulles, a moment of cold-war climax had come.

It was necessary to call Russia's hand in the game of economic competition. Dulles firmly believed the Soviet Union was not in a position to deliver effectively on all her economic propaganda offers.

It was necessary to demonstrate to friendly nations by act rather than by oral explanation, that U.S. tolerance of nations which felt it necessary to stay out of Western defensive alliances could not brook the kind of insult Nasser presented in his repeated and accumulated unfriendly gestures.

It was necessary to make the demonstration on a grand scale. In Ceylon, the new neutralist Premier, Bandaranaike was talking about selling the Russians radio time on a station which the United States had built. It would mean nothing to react by dismantling and removing the station — the gesture would be too petty.

Nasser combined the right timing, the right geography and the right order of magnitude for a truly major gamble in the cold war.

The drama was heightened when Ambassador Hussein announced that he had returned to accept the American offer, and to drop all previous objections about the details. Despite some small clues of American attitude dropped by State Department officials in testimony on appropriation bills, the general public assumption was that the United States had won out in the competition with Russia to build the Aswan Dam, for reasons Nasser did not explain.

Consequently, when it was announced, following a fifty-minute talk between Dulles and Hussein after they both reached Washington, that the United States was withdrawing its offer to help finance the dam, the effect

was electric. The drama had come to a climax with a highly unexpected twist.

Why had Dulles waited so long? Why did he turn down Nasser so brutally, without a chance to save face? Why did he let it go at that, without making propaganda designed to point out the moral to neutrals? In effect, it was Nasser who created the dramatic spectacle. Until he sent Hussein back to announce that Egypt wanted the money for the dam, after all, the United States had gradually reached the conclusion from Nasser's disinterest that he did not intend to pick up the offer. Since it appeared he did not want the money, it seemed unnecessary to announce he would not get it. Only after he raised the issue publicly did it seem appropriate to answer.

The choice was between letting him down easily, through protracted renegotiation that came to nothing, or letting him have it straight. Since the issue involved more than simply denying Nasser money for a dam, a polite and concealed rebuff would fail to make the really important point. It had to be forthright, carrying its own built-in moral for neutrals in a way that the ormolu of applied propaganda would not cheapen.

As a calculated risk the decision was on a grand scale, comparable in the sphere of diplomacy to the calculated risks of war taken in Korea and Formosa.

It risked opening a key Middle East country, one whose territory bracketed the strategic Suez Canal, to Communist economic and political penetration. It risked alienating other Arab nations, controlling an oil supply without which Western Europe's mechanized industry and military defences would be defenceless.

Dulles' bet was placed on his belief that it would expose the shallow character of Russia's foreign economic pretensions and that most nations would accept the thought that there comes a time when tolerance must give way to firmness. He risked the prestige of the United States on those beliefs, knowing it would bring reaction on a commensurate scale, and counting on U.S. power and resourcefulness to cope with the change and movement in Middle East and cold-war politics which it would bring about. His experience at sailing in diplomatic waters convinced him the breeze would be better if he took a new and independent tack. Nasser reacted one week later, almost to the hour, by seizing the Suez Canal — but not, surprisingly, by turning immediately to Russia for aid on the dam. The future of that project remained for the moment obscure, an unknown quantity in the manoeuvering that was to follow.»

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LESLIE GREENER (Australian archaeologist and member of the joint expedition of the Swiss Institute of Cairo and the Oriental Institute of Chicago). Author of HIGH DAM OVER NUBIA, London, 1962.

«...The diversion canal was being cut, road and rail access established, power brought out, and material moved, behind the scenes as it were. In fact the last thing you see in the construction of a dam is, quite obviously, the dam itself. All I could see from the deck was a long ramp cut in the cliff, on which engineers urged a mechanical thing that roared at them like a camel. There has a heavy power cable across the river, and two barges with machines and derricks mounted on them anchored in the stream, apparently doing nothing at all. No doubt they were performing invisible operations on the bed of the river, but I readily understood how this quiet scene would have been seized upon by mischief-makers in Cairo who had started a whispering campaign that no progress had been made on the famous dam since President Nasser had exploded ten tons of dynamite on 9 January 1960, to start the digging of the diversion canal. Some of these rumours found their way into the British and American Press, as they were intended to do, for the regime and all its works has enemies. It is best to pay no attention to such tales, and rather wait and see. The Russians, who are providing the finance and the technical skill for this outsize project, are experienced dam-builders, and they have proved their capabilities in other fields of late. Whatever our private opinion of their social organisation it is foolish to suppose that they would allow themselves to fall flat on an undertaking so much in the eye of the world, and so much less difficult of achievement, I would guess, than putting a man into orbit. Make no mistake about it; the High Dam will be built and finished before 1970, its deadline, given political stability.

The investor in the High Dam project is, as we known, Russia. I am too confused by politics to understand why Western nations are not doing this job, with the business, influence and prestige it would have brought them in the Middle East.

If «certain Powers» now accuse Nasser of leaning too far East, they have only themselves to blame. They could have been putting up that dam now. It should have been realised at the time that the dam project was no mere grandiose whim of Nasser's. It was essential for Egypt. The Government of the United Arab Republic has no sympathy with Communism as a way of life — indeed it is dangerous to be a Communist in the United Arab Republic — but they had to get money and help for that dam from whomsoever they could. The Russians were waiting and willing. The opportunity to win friends and influence in Africa was handed to them, one might say, on a plate.

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ERSKINE B. CHILDERS, (Irish free lance writer and broadcaster on international and especially Afro-Asian Affairs). Author of «THE ROAD TO SUEZ» (A study of Western-Arab Relations), London 1962.

The idea of building a second dam near Aswan had been in hydrologists minds for decades. It was detailed in proposals made by Daninos in 1947. Late in 1952, when the young officers of the Egyptian Revolution set about planning economic development, the idea was assigned to urgent study. This continued until, in October 1954, Colonel Nasser announced the decision to go ahead with what he described as the cornerstone to Egyptian economic progress. (It was a persistent part of misinformation in the West, both deliberate and innocent, that the High Dam was «dreamed up by Nasser» only in late 1955 as a fresh demogagic diversion (e.g. John Connell, «The Most Important Country», pp. 85-86, Cassell, London, 1957). More Western consultants were brought in: the scheme was ex-

haustively scrutinised, and approved. In November, 1955, Egypt's Finance Minister, Dr. Kaissouny, travelled West to negotiate loans. It was already known that Russia had offered aid in materials and equipment.

The High Dam project matured in Egyptian experts' minds, not as the answer to any one need, but as a complex of best answers to many needs. Egypt, her population exploding by 500,000 every year, was living off 6 million acres of cultivated land — only two per cent of her vast, deluding territory as it appears on the map. To appreciate what this means, some comparison is necessary. In 1956, 23 million Egyptians had 6 million acres of usable land to live off. In 1956 52 million Britons had 45 million acres of usable land to live off. Even so, Britain spent over one billion pounds on net imports of basic foodstuffs, despite one of the most efficient, intensive agricultural systems in the world.

Egypt's problem of increasing cultivated acreage, unlike that of a temperate-zone country, was not simply a case of teaching peasants and giving them seed, stock, and fertiliser. It was a problem of **water,** in a virtually rainless land: a problem of trapping and storing the millennial lifeblood of the Nile. Without more water-storage facilities on the Nile, there was no hope of pushing back those grim straight lines dividing desert and sown. Every year, an average of 28 milliard cubic metres of Nile water was flowing uselessly into the Mediterranean. In those milliards lay the partial answer to Egypt's man-acre-ratio, a ratio growing steadily worse in a rural society so illiterate and tradition-bound that no Utopian birth-control programme could succeed until the **fellahin** began to lift their heads and think for themselves. (The classic factor of high birth-rate in acute poverty and social inertia, a factor initially aggravated by modern medicine, and only reversed when an entirely new mental horizon on life enters the village or slum).

If the problem had been simple water-storage **per se,** the obvious answer would have been to build a series of new medium-size dams on the Nile. But there was an additional factor — the fluctuations of river volume, one year slack, the next so dangerously high that 25,000 labourers must stand alert along the banks which, if breached, could cause the flooding of anything up to a quarter of inhabited Egypt. The need, long recognised by experts, was thus for «century» or «over-year» storage — a reservoir-dam system that could both end the flood-danger and hold sufficient water to maintain maximum irrigation even in low-volume years. That meant a «high» dam — a really big one.

The experts calculated that the High Dam reservoir could store enough water for permanent cultivation of another two million acres — piteously little relative to the problem, but at least increasing acreage by one-third. To many Western eyes, even this seemed to offer forlorn hope, because in the ten to fifteen years of building the Dam, Egypt's population would increase to the point where the man-acre ratio was just as bad as ever even with the extra cultivated acreage. None of the experts denied this. But there was more to the High Dam scheme than irrigation water. The head of water it would build up could be used for hydro-electric power — 10,000 million kilowatt-hours per year (Britain's output in 1955-56 was 75,000 million k.w.h.). And it was clear that only through massive industrial expansion, as well as maximum cultivation, was there even a chance for Egypt to break out of the frightening vicious circle of poverty which the 1952 Revolution inherited.

So the High Dam offered power for industry. But industry does not absorb surplus labour **en masse** : it could not begin to absorb Egypt's relentlessly increasing number of unemployed and under-employed. Again, if you tackled Egypt's Western-trained economic experts on this, they agreed. But what industry could do towards the overall labour-surplus-poverty problem, they argued, was to increase **national** income — by an annual £335 million, they calculate, for the overall Development and Production Plan. (Steel — now in production at the new Helwan plant — fertilisers, for which a new factory at Aswan, close to local raw materials, is under way; textiles; glass; ceramics; autos; electronics; shoes; et cetera.) As one expert put it: «The Dam won't give every Egyptian, and every new Egyptian, a higher individual income, just like that. But at least it will give us a chance to provide for him from the central revenues — and even that will be a godsend. Every extra Pound Egyptian that could be injected into industry, education, housing, health, nutrition, would bring the country closer to the economic «take-off» point — and the social take-off point at which the population spiral might slow down.

These, then, were the basic arguments and hopes in the vision of the giant rock-filled concrete wall above Aswan town. The deeper one delved into it, and into Egypt's problems, the more easy it was to see why it had caught public as well as official imagination. Even the most ignorant **fellah** understood what a big, new dam on the Nile could mean. He eked out his days literally, physically, around the waters reaching his fields from the great river. He learned to build dams and open dams, control and divert miniature Niles, from the moment he could accompany his elders to the fields. He knew, literally from the threat of fines for excess use of irrigation water, how precious the bounty of the river was to Egypt. And he knew that there were already dams on the Nile ; yet still, every year, enormous quantities of water flowed uselessly through the country and out to the sea. From 1954 onwards, the High Dam was a popular vision.

But the High Dam would cost at least £400 million — impossibly, wildly, beyond Egypt's financial resources. Czech arms or no. Here, then, was a classic instance of the need for enlightened foreign capital assistance in Afro-Asia. Here was a project that carried the closest possible connection of gratitude and friendship between the donor governments and peoples, and the misery-ridden peasants who would benefit. To believe that this project, exhaustively studied for years, Egyptian to the core, was nothing more than a dictator's «demagogic pyramid», was to make a very dangerous assumption indeed. To believe that one could publicly offer and then publicly withdraw financial help for it with impunity — injuring only the régime promoting it — was to play with dynamite. **No develop-**

ment loan in Afro-Asian was so intimately connected with mass public opinion.

World Bank

The negotiations between Egypt and the World Bank continued from February to June, 1956, as the snowball of antagonism rolled on. In America, Congressional opinion turned more and more resolutely against Egypt and the High Dam. Zionist spokesmen pressed home the story that financial aid for it would only bolster the prestige of a megalomaniac crypto-communist dictator. Southern legislators were somehow given to understand that the increased acreage would be used for greater Egyptian cotton production — a thesis diametrically opposed to long-known Egyptian economic thinking. (Fear of continued dependence on cotton was one of the first impulses of post-1952 Egyptian economists. The High Dam's additional acreage was to be used for anything but cotton. There were already stringent ceilings on cotton acreage.)

Mr. Dulles, who in June declared that neutralism was an immoral and short-sighted conception, heard from Mr. Pineau what France thought of Nasser. The Egyptian recognition of China had a devastating effect.

Mr. Dulles had spent most of his life in high diplomacy. He had been known to make ill-considered verbal, impromptu statements ; but never ill-considered written communiqués. He knew, as the most junior diplomat would know, that the withdrawal of a previously, publicly offered gigantic development loan to any government for anything is a delicate matter. If, as his July 19 statement also asserted, the U.S. Government wished to maintain «friendly relations» with the Egyptian Government and people, then prior secret discussion of withdrawal with Cairo was obviously essential.

Instead, Mr. Dulles :

1. First allowed Egypt publicly to announce that she accepted the loan offers and their conditions ;

2. Then, and only then, announced to the world that the offers were being withdrawn — and announced this without, even then, first advising Cairo or allowing the Egyptian envoy time to advise Cairo.

3. Deliberately worded the withdrawal statement to make it one of seldom-paralleled rebuke and criticism of the Egyptian economy and its Government.

Egypt was not alone in this instant reaction. Pandit Nehru, who was guest with Nasser at the time **en route** home from Brioni, angrily denounced the U.S. action. Politicians and editors clear across Afro-Asia described the withdrawal as insulting, and obviously indicating that U.S. aid was conditional on subservience to U.S. policy. The Lebanese Premier described it as «an insult to all Arabs»; the Pakistani, Indian, and Indonesian Press described it as «open diplomatic blackmail». And within two days, authoritative Press reports from Washington itself confirmed that this — and not any doubt about Egypt's economy — was precisely what had moved Mr. Dulles. State Department spokesmen told reporters that not only Egypt, but «other countries», must be taught that they could not «extort concessions from the United States». There was talk of «slapping Nasser down for his neutralism». World Bank spokesmen were so annoyed that they scarcely concealed their view that no new factor had altered the merit of the High Dam, or Egypt's ability to finance her share of its cost. (cf. **The Times,** report from Washington, July 21, 1956).

The official Western theme of refusing to help an Egypt that had been «playing off East against West» was, at the least, petulant. Western statesmen had first offered the loans to Egypt knowing, even then, that Moscow was fishing in the Dam's project waters. All three sides knew this was a contest. The one significant indication was that Egypt, from the very outset, had shown a clear preference for Western aid — a preference both Western Powers were quick and eager to exploit. In short, everyone was «playing off» everyone else ; and like Ustinov's envoys, they knew that the others knew that they knew the others were doing so. But the charge of Egyptian «trickery» was certainly effective in Western public opinion

In this extraordinary decision, Washington appeared to take the initiative, unilaterally. The British Foreign Office statement at noon on the 19th, reaffirming British readiness to fulfil the loan offers, seemed to point up the fact that Britain's withdrawal the next day was only a surprised, reluctant, and unavoidable sequel to an American withdrawal of a joint, interdependent offer. There had been no joint, simultaneous withdrawal : the whole thing had come from Washington, apparently out of the blue. As a result, Arab anger against America was accompanied by British public resentment of the U.S. Government for provoking a major international crisis. The facts seemed to speak for themselves.

From June onwards, it was obvious to anyone closely observing events that the whole Aswan loan issue was moving to a climax; that Egypt was about to make a decision. Now it followed as the night the day that, if Eden decided — in face of this known climax — that the offers must not be fulfilled, then Egypt must be requested not to make any public announcement of her decision. Ignoring for a moment the first illogicality noted above, and taking Eden's words at face value, the withdrawal could not be «played long» if **Egypt,** by making a public decision, «forced the issue». It was Britain — and the United States — that must make the first **public** move. If Egypt were to «accept» publicly, Eden's whole professed aim would collapse. Egypt would gain sympathy, not lose prestige.

Yet we know, quite positively, that neither Eden nor Dulles ever requested Cairo to refrain from public announcements about the Aswan negotiations. We know this, not only from British sources, but because the U.S. Ambassador to Egypt testified later on oath that he knew nothing whatever about a withdrawal decision or a withdrawal announcement until he learned of it on July 19 from Cairo newspapers. (cf. Mr. Byroade's testimony before the U.S. Senate Foreign Relations Committee, 85th Congress, on Senate Resolution 19, p. 717. Byroade was in deep disfavour with Dulles by mid-July for being too «pro-Nasser», and received reposting orders on July 16. But he was in Cairo; knew everything that Nasser knew;

knew nothing about any Anglo-American decision in advance of July 19).

Nasser authorised Ahmed Hussein to announce Egypt's acceptance in the confident belief that — however unfavourable the general Western climate of public opinion — the offers did stand.

So, then: Eden's professed preference for «playing it long» is not only completely inconsistent with the very reasons for withdrawal which he himself describes; but he did not even take the minimal, elementary precaution to ensure that he would be **able** to play it long. But there is still worse in this strange story. He asserts that right up to the moment, on July 19, when he learned what Dulles had done, he had seen «no need to hurry» a decision about timing and method of withdrawal; and that he had had «no opportunity» to consult with Dulles before the latter made his announcement. Sir Anthony is able to put this assertion into print only by judiciously omitting from his account the crucial facts about mid-July.

He omits all mention of the fact that **it was two days before Dulles spoke that Egypt publicly accepted the Western offers** ; asked for the earliest completion of the loan agreements ; and requested an early meeting with Mr. Dulles. All this was known on July 17 ; it was flashed across the Atlantic by Press wires, even if in some strange way the whole machinery of the Foreign Office might have broken down. By the morning of July 18, Sir Anthony Eden simply could not have been unaware that there was **no definite need to hurry** — hurry a decision how to revoke the offer Egypt had accepted, hurry into consultations with Dulles before he met the Egyptian Ambassador. Yet Sir Anthony writes that he knew none of this.

Every reader of **The Times** foreign news page knew it; listeners to BBC news bulletins knew it. Sir Anthony had two days — even on his own story of not wanting to announce withdrawal — in which to consult Washington and arrive at a joint form of response to Egypt's public acceptance. Is it really to be credited that, in an issue in which, according to his own written retrospect, Britain and her «friends» were so deeply and seriously involved, he was in no way worried about the news of July 17 ? Saw no need to take any action ? Still felt that the withdrawal he had decided upon could be «played long»; that «there was no need to force the issue» ?

Sir Anthony has written a weak story. In so doing, he has increased a hundredfold the suspicions already well grounded that he and his colleagues were by no means the innocent, surprised, unconsulted partners in the Aswan fiasco. (cf. inter alia, Wint and Calvacoressi, **Middle East Crisis** : «How far Britain was consulted about America's doubts ; and whether she may have taken steps to enlarge them, is still one of the mysteries of these transactions.» Roscoe Drummond and Gaston Coblenz, in **To The Brink,** assert that Dulles was very much prompted by Eden).

Why did he wish to tell a story like this ? What did he feel he had to conceal ? In fact, why is it that, for the very beginning of the Suez crisis as for its explosive culmination, Eden falsely claims «no opportunity to consult» with the United States ?

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GEORGES VAUCHER, author of GAMAL ABDEL NASSER ET SON EQUIPE, Paris, 1960, p. 221.

In France and in England, the socialist government of Messrs. Guy Mollet and Pineau, as well as the conservative Cabinet of Mr. Eden, were furious at the boldness of the Egyptian nationalist leader. In Washington, Mr. Dulles and President Eisenhower realised, too late, that they were wrong in using the power of the dollar to give a lesson to an underdeveloped country which they had promised to help.

What is most astonishing in this affair, is the surprise of the three Western governments at the news of President Nasser's riposte to their attempt to humiliate him, and to make him lose face before the Egyptian people and before the other Arab countries. If the three Foreign Ministers had taken the trouble of consulting their ambassadors in Cairo before taking such a decision ; if they were seriously composed before notifying Egypt of it, they would have realised that the withdrawal of Western aid could only have brought two results :

— **either throw Egypt into the arms of Russia,**

or,

— **compel her to seize the only supplementary source of foreign bills existing in her territory, the Egyptian company which collected dues from ships transiting through the Isthmus of Suez.**

The political mistakes committed in the six months following the nationalisation of the Canal Company have not only been responsible for one of these issues, but the two unfortunate results of the withdrawal of Western co-operation have come about. The military action which was undertaken, and later suspended, has moreover launched a series of disastrous retaliatory measures against the moral, political and economic positions of Europe and of the United States in Egypt and in the world.»

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Mr. RICHARD NIXON

In conclusion, we give the opinion of Mr. Richard Nixon, former U.S. Vice-President who in June 1963 paid a four-day private visit to the United Arab Republic and was received in audience by President Nasser.

Before leaving Cairo, Mr. Nixon told a press conference: «Your country is an ideal place for tourism. One should visit it during all the seasons of the year.»

Speaking of the High Dam at Aswan where he spent three hours at the work site, Mr. Nixon said: «I am now thoroughly convinced that the High Dam project, when accomplished, will be one of the wonders of the modern world. It really impressed me as miraculous.» He added that all Americans wished this enterprise every success.

Asked whether he still believed that the U.S. was right in withdrawing aid to the High Dam in 1956, the former Vice-President said: «In fact, I was then member of the Government which took that decision. Admittedly, I should say that we never claimed that we always take right or sound decisions.»

THE HIGH DAM

CHRONOLOGY

HIGH DAM CHRONOLOGY

1947

An agricultural engineer, Andre Daninos, and an Italian engineer, Luigi Galioli, proposed to the Egyptian authorities the construction of a great dam, capable of retaining for several years the waters of the Nile flood. The responsible Ministers interested themselves in the project only in a very superficial way. Nothing was effectively undertaken towards a serious study of this proposition.

July 30, 1952.

Engineer Daninos was received by Air Commander Ali Sabry at the Revolution Council Headquarters. He submitted his project to Commander Ali Sabry, who in turn, passed it to engineers of the High Command. After a preliminary examination of the plans the engineers declare the project feasible.

October, 1952.

Dr. H.E. Hurst, expert at the Ministry of Public Works, and some of his colleagues, were entrusted with the task of making hydrological studies with a view to constructing a gigantic dam across the Nile. At the same time, the German firm Hochtief was asked to prepare a draft project to be completed by March, 1953.

April, 1953.

An international committee of experts met in Cairo with the Egyptian committee of the High Dam, presided over by engineer Samir Helmy and comprising Dr. Mohammed Ahmed Selim and Dr. Hassan Zaki. The outlines of the entire project were drawn up.

The draft project rapidly prepared by the German firm Hochtief was rejected. The dam envisaged by this firm would have a height of one hundred metres, and a width (east-west) of five kilometres, of which 650 metres would be over the bed of the river. Soundings taken by the Ministry of Public Works showed that there was sand up to 50 metres of depth. Other soundings showed that the bed of sand, silt and gravel reached 200 metres.

December, 1953.

A banking mission from the Federal Republic of Germany arrived in Cairo to discuss the question of financing the High Dam.

June, 1954.

A French banking mission arrived in Cairo to study the possibility of financing the High Dam project at Aswan.

November, 1954.

An Anglo-French-German consortium seemed interested in participating in the financing of the High Dam.

December, 1954.

The High Dam proposed at that time would have been an enormous edifice 110 metres high and five kilometres long. Seven diversion tunnels constructed on the right bank of the Nile were envisaged to lead the Nile water from upstream to downstream of the Dam.

Four other tunnels constructed on the left bank would serve the hydro-electric power station.

August 30, 1955.

In an economic report drawn up by the World Bank it was stated that even were the High Dam completed, in the light of Egypt's demographic growth «**there is little or no chance at all that Egypt can do much to raise the actual standard of living... in 1975** ». The report also said, among other things, that «**Egyptian finance seems in order if the Egyptian government does not seek to proceed forward on all fronts at the same time and at a speed out of proportion with its organisation, its administrative capacities and its expected financial resources.**»

October, 1955.

The Soviet Union began to show interest in financing the High Dam. Mr. Hassan Ibrahim, Chairman of the Higher Council for Production, said that a Soviet offer for the financing of the High Dam was made directly to President Gamal Abdel Nasser.

The Egyptian Ambassador in Washington informed Mr. John Foster Dulles that Egypt would favourably receive financial aid from the United States and the World Bank for Reconstruction and Development, for the financing of this project.

October, 1955.

Mr. Eugene Black, President of the World Bank, sub-

mitted to the Board of Directors of the Bank a memorandum in which he suggested that Egypt «must not only mobilise the necessary funds internally and externally, it must also adopt a healthy method of financing this project and follow an adequate fiscal and economic policy.» He also said that «the actual and future engagements by Egypt are superior to the resources which it can probably have during the critical period of its construction.»

November, 1955.

The Soviet Ambassador informed the Egyptian authorities that the Soviet Union was willing to construct and finance the High Dam in exchange for payment in cotton over a period of twenty-five years.

December 16, 1955.

Mr. Black, President of the World Bank, wrote a new memorandum in which he said that «the World Bank has not arrived at a firm conclusion regarding the subject of the economic aspect of the High Dam project as a whole before a definite determination of the quantity of water it can store.»

December 17, 1955.

The United States and Britain announced that they had offered Egypt a loan of 70 million dollars, 56 million from the United States and 14 million dollars from Britain. The first payment would serve towards the construction of the dam and seven diversion tunnels. A memorandum attached to the accord stipulated that no long term contractual engagement could be undertaken, but the two governments would favourably receive other requests for complementary financial aid.

December 17, 1955.

The Soviet Ambassador in Cairo, Mr. Solod, commenting on the Anglo-American offer of financing the preliminary works on the High Dam, said that the U.S.S.R. was still interested in and decided on participating in the financing of the High Dam «unless contrary stipulations in Egypt's accord with the Western powers excludes us specifically.»

A U.S. spokesman answered these declarations, saying that the exclusion of the Soviets was implicitly understood in the Western offer.

December, 1955.

Notes were sent to the Ambassadors of the United States and Britain in Cairo which said, among other things, that «the terms accompanying the Anglo-American offer carry a considerable prejudice to the dignity of Egypt.»

February 9, 1955.

Dr. Abdel Moneim el Kaissuny, Minister of Economy of Egypt, said that **Egypt accepted in principle the loan granted by the World Bank.**

February 9, 1956.

In a memorandum from the Egyptian Government to the World Bank it was mentioned, among other things, that «**the contribution of the Government (of Egypt) to the project will be effected in a manner which will avoid any inflation and any shaking of Egyptian finances.**» Towards this end the government and the Bank will reach an understanding and periodically examine a programme of investments which recognises the priority of the High Dam project and the necessity of adjusting the total spending of financial resources which can be mobilised.»

March 15, 1956.

The counter-suggestions of the Egyptian Government to the Anglo-American offer were submitted to the U.S. Government. These suggestions were not accepted by the State Department.

March 17, 1956.

A U.S. spokesman, speaking of the High Dam, stated: «We have made an offer and the offer still stands.»

April 2, 1956.

President Nasser said that Egypt had not rejected the Soviet offer to finance the High Dam. He also said that «the Soviet offer is of a general order and has not been examined until this day.»

June 21, 1956.

In a U.S. statement it was announced that the funds destined for a loan to Egypt for the financing of the High Dam would most probably have to receive new approbation from Congress.

July 9, 1956.

World Bank President Eugene Black re-affirmed the loan offer in a letter to the Egyptian Finance Minister.

July 16, 1956.

A United States House Committee asked the American Administration not to effect expenditure from the Mutual Security Funds on the High Dam.

July 19, 1956 (noon).

A spokesman for the Foreign Office in London reaffirmed that Britain was still disposed to implement the offer of a loan to Egypt for the construction of the High Dam.

July 19, 1956.

Upon his return to Washington, the Ambassador of Egypt, Mr. Ahmed Hussein, was received by Mr. John Foster Dulles, U.S. Secretary of State, who handed him the following Note :

«**At the request of the Government of Egypt, the United States joined, in December, 1955, with the United Kingdom and with the World Bank in an offer to assist Egypt in the construction of the High Dam on the Nile at Aswan. This project is one of great magnitude. It would require an estimated twelve to sixteen years to complete, at a total cost estimated at some 1.3 billion dollars, of which over 900 million represent local currency requirements. It involves not merely the rights and interests of Egypt, but of other States whose waters are contributory, including the Sudan, Ethiopia, and Uganda. The December offer contemplated an extension by the United States and the United Kingdom of grant aid to finance certain early phases of the work, the effects of which would be confined solely to Egypt, and with the understanding that accomplishment of the project as a whole would require a satisfactory resolution of the question of Nile water rights. Another important consideration bearing upon the feasibility of the undertaking and thus the practicability of American aid was Egyptian willingness and ability to concentrate its economic resources upon the vast reconstruction program.**

«**Developments within the succeeding seven months have not been favorable to the success of the project, and the United States Government has concluded that it is not feasible in present circumstances to participate in the project. Agreement by the riparian States has not been achieved, and the ability of Egypt to devote adequate resources to assure the project's success has become more uncertain than at the time the offer was made.**

«**This decision in no way reflects or involves any alteration in the friendly relations of the Government and people of the United States and the Government and people of Egypt. The United States remains deeply interested in the welfare of the Egyptian people and in the development of the Nile. It is prepared to consider at an appropriate time, and at the request of the riparian States, what steps might be taken towards a more effective utilization of the water resources of the Nile for the benefit of the peoples of the region. Furthermore, the United States remains ready to assist Egypt in its efforts to improve the economic condition of its people and is prepared, through its appropriate agencies, to discuss these matters within the context of funds appropriated by Congress.**»

July 19, 1956.

Having briefly received Mr. Ahmed Hussein, the Egyptian Ambassador in Washington, Mr. John Foster Dulles publicised during a press conference, a communique declaring that the United States has retracted its offer of a loan to Egypt, affirming that «developments have not been favourable to the success of project... and the ability of Egypt to devote adequate resources to assure the project's success has become more uncertain than at the time the offer was made.»

July 20, 1956.

The Under-Secretary of State at the Foreign Office handed an Egyptian diplomat in London a Note on the subject of Britain's retraction of the offer of 14 million dollars in aid to help Egypt start the preliminary work of construction of the High Dam.

Mr. Eugene Black, President of the World Bank announced at the same time that in view of the retraction of the Anglo-American offer to finance the early phases of the High Dam, the World Bank could not give Egypt the loan of 200 million dollars which one week earlier it had agreed to provide Egypt with.

July 26, 1956.

On the evening of July 26, 1956, President Nasser, addressed a mass rally at El-Horriya Square in Alexandria and announced **inter alia** the nationalisation of the Suez Canal Company.

Speaking of the High Dam President Nasser said: «The annual income of the Suez Canal Company is 100 million dollars. Why not take it ourselves ? We shall build the High Dam as we desire... The Canal Company will be nationalised. And it will be run by Egyptians...».

August 17, 1956.

Mr. Christian Pinaud, French Minister of Foreign Affairs, said at the London Conference :

«The Egyptian Head of State had the intention of financing the High Dam from the Canal revenues. At the present time, the total amount of returns is in no way commensurate with the considerable expenditures necessary for the construction of the High Dam. It would be an absolute impossibility to finance the dam with the revenue from the Canal without a considerable increase of transit tolls. It is thus that we are all running a particular risk at this moment.

«No one can affirm that the users have the necessary guarantees to the effect that their ships can freely transit the Suez Canal without discrimination by paying reasonable dues. This is just as valid for Asiatic powers as it is for the European.»

October 23, 1958.

During an official visit by Field Marshal Abdel Hakim Amer, Vice-President of the United Arab Republic, to Moscow, Mr. N. Khrushchev announced that the Soviet Union would give Egypt a loan of 400 million rubles (nearly L.E. 37.5 million) for the construction of the first stage of the High Dam at Aswan, with an interest rate of 2 per cent.

November 11, 1958.

A Republican Decree stipulated the creation of a Higher Committee for the High Dam. This Committee has an independent moral character and is run by special rules.

(See full text in «Documents» section).

December 27, 1958.

An accord was concluded in Cairo between the U.S.S.R. and the U.A.R. by virtue of which the U.S.S.R. took it upon itself to provide the U.A.R. with its technical and economic aid for the construction of the first stage of the High Dam.

(See full text in «Documents» section).

March, 1959.

The first group of Soviet experts and engineers arrived in the U.A.R. to study on locale the technical data of the project. They suggested certain modifications of the initial plan. They proposed to dig an open canal connected with six tunnels traversing the very body of the Dam and comprising the sluice gates and the hydro-electric station, this replacing the seven tunnels leading upstream to below the Dam downstream. This modification would permit a saving of L.E. 13 million.

June 29, 1959.

President Nasser approved the Soviet counter-project embodying certain modifications to the initial project of the High Dam.

November 8, 1959.

An accord was concluded between the U.A.R. and the Sudan for the utilisation of the Nile waters on the occasion of the construction of the High Dam at Aswan.

(See full text in «Documents» section).

January 7, 1960.

President Nasser asked Soviet Minister Novikov if the U.S.S.R. was willing to help Egypt in the second stage of the High Dam.

January 9, 1960.

The President, accompanied by the late King Mohammed V of Morocco, inaugurated construction work of the first stage of the High Dam at Aswan by detonating tens of tons of dynamite. The digging of the diversion canal was begun.

The President said on this occasion that **«the High Dam is the symbol of the determination of the entire Arab nation to build up its great, liberated homeland...** Those who struggled to transform this hope into a reality and who feared neither steel nor fire, did not do it only to tear one or two million feddans from the desert and to guarantee the production of billions of kilowatts of electric energy, but also and above all to practise their free will, which they had liberated from despotism, from the occupation and from tyranny.»

January 17, 1960.

Cairo Radio announced that the U.S.S.R. had agreed to participate in financing the second stage of the High Dam and accorded its technical aid for its realisation. Letters exchanged between President Nasser and Premier Nikita Khrushchev were also published.

August 27, 1960.

An agreement was concluded in Moscow between the U.S.S.R. and the U.A.R. governing technical assistance which the U.S.S.R. will provide to the U.A.R. for the construction of the second stage of the High Dam.

(See full text in «Documents» section).

October 14, 1960

The first cargo of Russian material for the construction of the first stage of the High Dam left Odessa for Alexandria.

October 16, 1960.

On his return from the annual meeting of the World Bank, Dr. Abdel Moneim Kaissuny, Minister of Economy, said that this organistion had recognised the economic progress realised by the U.A.R. in spite of the relative decrease of cotton prices and the reduction in the rice harvest in Egypt.

February 18, 1961.

The Higher Committee of the High Dam approved the offer submitted by the Technical Society for Industries and Public Enterprises for the implementation of the first stage concerning the digging of the diversion canal and the construction of the protection dam. It also approved the offer of the Misr Company for reinforced concrete to be used in the operations.

March 16, 1961.

An agreement was concluded between the Higher Committee of the High Dam and the Ministry of War for the provision, by the Military Factories, of the necessary explosives for the digging of the diversion canal.

August 2, 1961.

The U.A.R. and the U.S.S.R. signed contracts relating to the High Dam with a total value of L.E. 13.5 million. They concerned clearing and filling operations.

January 15, 1962.

Mr. Novikov, Soviet Minister of Electric Energy, and Mr. Mussa Arafa, U.A.R. Minister of the High Dam, held a press conference during which they stated that more than a quarter of the diversion canal had already been dug and most of the work of the sub-structure — roads, social services, offices, etc., — had already been done.

January 17, 1962.

Letters were exchanged between President Nasser and Premier Khrushchev. Among other things Mr. Khrushchev said : «**...facts indicate that the imperialists are not at all pleased about our cooperation to realise this remarkable work. They are carrying on a loud campaign about our difficulties and what they call «the failure of the construction work at Aswan»... Experience has shown that our project is not only being realised but has also exceeded the limits placed for it. This is also happening as regards the subject of the construction of the hydro-electric project, which is actually taking place in the U.A.R. with our assistance... The Soviet people consider that the construction of the High Dam at Aswan is a symbol of peace and friendship. We know, from our own experience, that young nations which have just begun their independent economic and political development are more than others in need of peace. This enterprise is the symbol of the U.A.R.'s love of peace, for its realisation is a sign of peaceful coexistence between nations and the triumph of peace in the world...**».

In his reply, the U.A.R. Head of State said : «**...This enterprise will also serve, in the heart of the African Continent, as a symbol of the great work which can be accomplished when free and equal cooperation reigns between two parties who believe in the necessity of guiding the life of man towards development and liberation, saving him from under-development and all exploitation, a cooperation founded on the conviction that this road alone can lead to freedom and peace... This Dam also represents the will of man to dominate nature in some way, and to harness it so that its resources become sources of well-being. This Dam represents the power of science as a weapon in the hands of man, a weapon which can realise that which at one time was believed to be impossible...**».

March 11, 1962.

A Republican Decree was issued embodying the expropriation of the goods and lands which will be submerged by the High Dam waters.

(See full text in «Documents» section.)

June 6, 1962.

An agreement was signed in Cairo between the U.S.S.R. and the U.A.R., the terms of which stipulate that the U.S.S.R. will furnish the U.A.R.with equipment and material for the High Dam valued at L.E. 2,500,000.

September 18, 1962.

The Higher Committee for Electric Power decided to send to the U.S.S.R., three hundred engineers, technicians and workers to receive a specialisation course of practical training in Soviet factories with a view to familiarising themselves with the functioning of the hydraulic systems of generating motor power of the Soviet dams.

September 20, 1962.

Mr. Mussa Arafa, Minister of the High Dam, received Mr. Ilyodor Kolov, Economic Counsellor at the U.S.S.R. Embassy in Cairo, who submitted to him the plans and final modifications of the High Dam project drawn up by Soviet technicians in collaboration with Arab experts.

November 7, 1962.

At a press conference, Mr. Mohammed Sidky Soliman (new) Minister of the High Dam, revealed that a plan was drawn up for 1963 envisaging the sending to Aswan of 5,800 skilled labourers, of whom 1,600 were chosen from amongst the workers of government administrations and public organisations ; 3,300 are following on site training courses, while another 864 are receiving professional instruction at vocational training centres.

November 20, 1962.

Speaking of the work in progress at the High Dam, Mr. Sidky Soliman stated that the construction of the power house will begin towards the month of December. He also stated that 65 per cent of the diversion canal had been completed, permitting the diversion of the Nile course towards mid-May 1964, while work in the six tunnels is proceeding at an accelerated pace.

January 9, 1963.

President Nasser made a tour of the High Dam, and during a ceremony dropped the first stone of the main body of the High Dam into the Nile, thus giving the signal for the construction of the colossal mass. During a speech on this occasion he said : «**Three years ago there was just one tent and several workers who carried out the first explosion. Today there are 18,000 workers. Next year we will have ended the digging of the diversion canal and proceeded towards diverting the river course. This country will thus have shown that by its determination it can accomplish the impossible.**»

January 16, 1963.

The protocol concerning the specifications and final plans of the High Dam was signed in Cairo by Mr. Mo-

hammed Sidky Soliman, Minister of the High Dam, and Mr. P. Niborgry, Soviet Minister of Electric Power. Contracts for the provision of Soviet equipment and material necessary for the work were also signed. The cost of the materials is estimated at 16.7 million rubles, i.e. L.E. 6.5 million.

January 17, 1963.

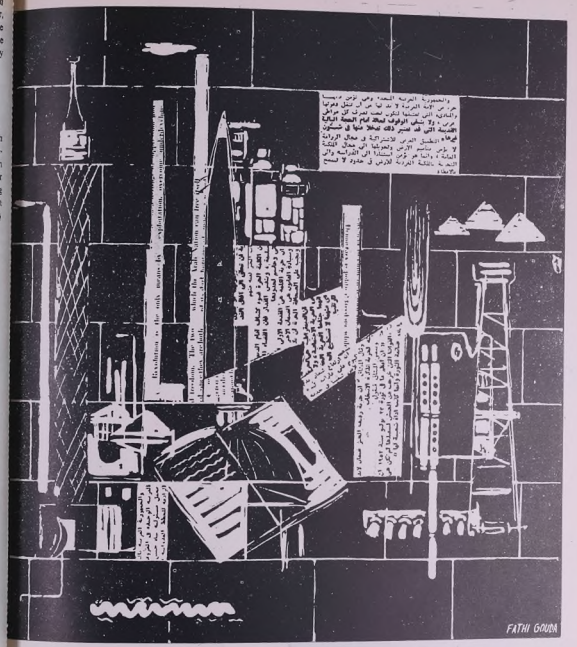
Two important meetings took place in order to take the necessary measures for the acceleration of work on the High Dam. The first, presided over by Mr. Aly Sabry, decided to give priority, in matters of foreign currency, to all import operations concerning the work on the High Dam.

October 21, 1963.

At the end of a series of meetings held under the chairmanship of Mr. Sidky Soliman, Minister of the High Dam , Mr. Alexander Alexandrof, chief Soviet engineer, stated that the waters of the Nile will be diverted into the diversion canal at Aswan between May 15-20, 1964, while the digging of the six tunnels will be completed in January 1964.

November 14, 1963.

At a press conference on the question of the reduction imposed by the U.S. Congress on the programme of American foreign aid, particularly to the U.A.R., President John Kennedy recalls the fact that the U.S. refusal of funds for the construction of the High Dam at Aswan did not bring the U.A.R. nearer to the United States. A contrary result was reached, and «it is the Russians who are presently building the High Dam.»



بناء الوطن

BENA' AL WATAN

ASWAN AT THE TIME OF THE HIGH DAM

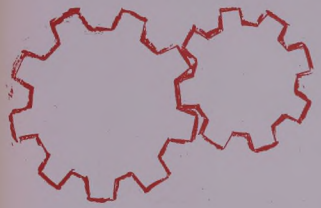
It was not by chance that Aswan chose January 9 for the regional anniversary of the governorate. It was because the construction of

the High Dam — construction work began on January 9, 1960 — opened a new era in the development of the U.A.R., and mainly Aswan, which is called upon to become, in the near future, an industrial centre of first importance, indeed, the principal industrial centre of the Republic. It was also not by pure chance that the first conference for regional planning in the U.A.R. was organized at Aswan. It was because this governorate has great prospects of industrial development that the authorities have endeavoured to show interest, in the first place, in its overall planning.

Since the beginning of construction work on the High Dam, the governorate of Aswan has not ceased to see the initiatives multiplying and the efforts for development being materialised; industrial and agricultural as well as commercial and urban. This activity originates from the gigantic engineering work we are celebrating this month — the completion of the first stage of the High Dam and the diversion of the Nile waters through the diversion canal, which will make possible the building of the main body of the Dam.

Aswan, which derives its name from the Pharaonic word «Su wano», which means market, existed until January 9, 1960, practically on the outskirts of the country, by reason of its distance from the capital and the delta. Its appellation (Suwano) was justified, and is still justified by the fact that it has always been a centre of transit and commercial transactions between Egypt and Sudan. It was known to tourists for its wonderful climate and for its famous granite, which was used in the construction of a number of temples, statues, etc., in the Pharaonic era, and later on for other purposes. The only known industry was that of quarrying granite blocks, the most flourishing industry in Ancient Egypt.

Under all the regimes which succeeded each other, the city retained its strategic and cultural importance. Its economic interest did not really appear until the construction of the Aswan Dam in 1902; it remained until the Revolution of 1952 as a place of exile for the officials who incurred the wrath of the government in power. The governorate of Aswan constituted an important centre for the cultivation of cotton and sugar-cane. An industry was developed there for the dehydration of dates, part of which was sent to the north of the country in exchange for vegetables and other products. The industrialization of sugar-cane was also developed. But that was about all.



The Revolution government which carried out studies concerning the construction of the Dam, was also interested in the development of the governorate of Aswan, for which important projects were established and carried out. The first plan for development, originally intended to occupy five years, was realized in three years. A plan was drawn up along the lines of the first national Five-Year Plan, which will be terminated in 1964/65, followed by the second national Five-Year Plan (1965/70). The latter is very much concerned with the governorate of Aswan. A considerable number of the projects and much of the investment goes to Aswan.

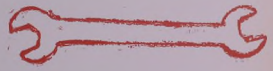
Industry in the governorate had its origin with the functioning of the electric power station of the present Aswan Dam, on January 9, 1960. The important source of energy, produced by means of nine turbines seven of which are large, has already made possible the creation of several industries. The biggest is undeniably the KIMA chemical fertilizer plant, where production began in May 1960. Four of the nine turbines at the electric power station provide electricity for KIMA, where annual production is 565,000 tons, valued at over L.E. 15 million. Average daily output is 1,600 tons.

Situated at a distance of three kilometres to the south-east of Aswan, KIMA is one of the most modern plants in the world and forms a sort of autonomous industrial city, with its own repair workshop, warehouses, laboratories for daily analysis of products, centres for professional training, garages, fire-brigade station, medical centre, hospital, restaurant and cafeteria. It employs 2,400 workers, divided into three shifts, receiving an average salary of L.E. 27 per month. The workers enjoy all the guarantees and multiple advantages granted them by the socialist laws. Thus, each worker receives the maximum of L.E. 50 annually representing his share in the profits of the enterprise. Medical care is free. A housing complex was constructed (Kima City) with modern and hygienic dwellings, equipped with all comforts. The rent is minimal : 50 piastres per month for a two-room apartment and 78 piastres for a three-room apartment. There is also a cooperative society for the sale of consumer goods, branches of various big stores, a cinema, a theatre, a swimming-pool, a primary school and a mosque.

Two of the Aswan Dam turbines operate for the High Dam, one furnishes the city of Aswan with electric current and the other two supply the other residential localities and industrial centres — Kom-Ombo, Esna, Kena.

At Edfu a sugar refinery was constructed over an area of 200 feddans. This was the most important industrial project in the first national Five-Year Plan. Its initial production capacity was 50,000 tons annually. Increasing gradually, it will attain 100,000 tons by the end of 1965.

The treatment of sugar-cane is one of the principal industries of the governorate of Aswan, and will be developed and perfected. Vast areas of the region are devoted to the cultivation of sugar-cane. The importance of this industry was emphasized by a conference, the first of its kind, which was held in Aswan from March 15 to 17 last. It was chiefly concerned with the improvement of the agricultural exploitation and the industrialization of sugar-cane, and the industrial utilization of the waste resulting from the first operation. The area set aside for the cultivation of sugar-cane will be greatly increased after the construction of the High Dam. The work of the conference was also concerned with the problems relating to cultivation, so that industrialization might be possible. It also studied such questions as the most propitious time for cultivation of sugar-cane, the system for combatting pests, ways of improving output, weeding, the best insecticides, etc.

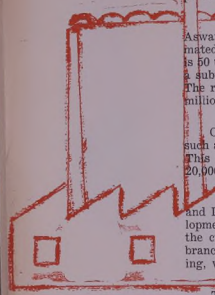


In addition to studying methods for industrialization of sugar-cane, the conference members examined the system of utilising bagase (cane residue) and other waste elements, with a view to fabricating granulated wood and paper pulp. Plants for this purpose are being built at Edfu.

It is interesting to note that the specialized services of the Ministry of Agriculture have obtained, by means of hybridization, new varieties of seeds at the experimental farms. The new seeds have been distributed to various regions and as a result the yield per feddan has increased markedly. In 1962/63 sugar-cane production in the U.A.R. rose to 360,000 tons, an increase of 33 per cent, while the area planted with sugar-cane increased by only 13 per cent. As for the sugar production itself, it increased by 65 per cent, allowing for exportation of a surplus production.

The plant for the manufacture of paper pulp from sugar-cane waste will start production in the second half of the current year. The installation of the equipment is under way, and the envisaged production for the first stage will be 18,000 tons annually.

The mineral resources of the governorate of Aswan, too, will make possible the establishment of new industries. The iron and steel complex at Helwan, a suburb of Cairo, uses the iron ore extracted from Aswan and shipped north by river and rail transportation. But iron and steel plants will be built in Aswan itself, at the source of the iron ore. The plant will have an annual production capacity of 1,200,000 tons.



The iron ore deposits are located to the east and the north of Aswan and cover an area of 1,200 square kilometres. Reserves are estimated at 130 million tons. The one is found in two layers, each of which is 50 to 200 centimetres thick. The mines are generally open, but recently a subterranean mine has been worked for the first time in the country. The reserves in the mine are estimated at 23 million tons, of which 24 million tons have been extracted up till now.

Other minerals are also found in abundance in the region of Aswan, such as phosphates, of which 264,000 tons are being extracted at present. This figure will soon reach 400,000 tons. Exports to Europe stand at 20,000 tons.

The Egyptian General Organization for Cooperative Production and Domestic Industries has contributed greatly to the industrial development of Aswan. It began its activities in Aswan in January 1962, with the creation of industrialization units for rushes and straw, date-palm branches, handicraft articles, sewing, cars and tractor maintenance, printing, welding and plumbing, metallurgy, etc.

The Organization has also installed several cooperatives, of which one is for the quarries and others for construction works and dressmaking and sewing. Several centres for the sale and marketing of locally-manufactured articles have been established, of which five are in the « Tourist Market ». There is also a permanent exhibition for ready-made clothes, carpets, household appliances, bags, shoes and miscellaneous leather articles.

Side by side with the vocational training centres — whose contribution to the task of industrialization is evident — created by the public authorities, the Organization has, on its part, established a large number of similar services. The young trainees attending these courses are called upon to form autonomous production cooperatives.

This initiative, designed to extend to all the governorates in the Republic, is deployed on the industrial level as well to complete the cooperative system in the agricultural field, practically generalized throughout the country.

The achievements so far are a long way from measuring up to the industrial future of Aswan governorate. Despite their importance, they are, in fact, only « preliminary » projects, if this term can be used, and relatively few if we compare them with the vast programme envisaged.

These projects were studied by the first regional conference concerning planning for the whole governorate, designed to promote growth in all sectors — industrial, agricultural, transportation, construction, education, man-power, vocational training, etc.

Preliminary studies for the conference (which will be duplicated in all governorates in due course) began in November last, with the initiative of Mr. Aly Sabry, then Member of the Presidential Council and Chairman of the Executive Council and now Prime Minister.

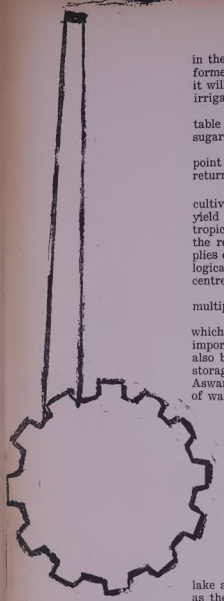
The conference proper was held in Aswan from March 8 to 14, with the participation of seven Ministers, several Under-Secretaries of State, directors of organizations, administrations, departments, members of boards of directors and 150 experts, 27 of them foreigners, among whom were university professors, and delegates of American, Danish, Polish,

West German, British, Dutch and Yugoslav firms, and representatives of international institutions such as the F.A.O. We should also mention the contribution of the American Ford and Fulbright foundations.

The appropriations for the realization of the multiple projects laid down by our experts and then examined by the conference total L.E. 110 million. Four study groups were formed, each charged with the examination of a particular aspect. The first concerned industry, mines and transportation; the second, examination of projects dealing with hydraulics, agriculture and affiliated matters (increase of animal wealth, etc.); the third, problems of man-power and vocational training; and the fourth social research, tourism, proper planning, etc.

All the projects must be completed during the coming five years (the second Five-Year Plan) and that is why an execution programme was drawn up with dates, complete studies of requirements from the point of view of equipment, raw materials, man-power, experts, etc.

A very brief resumé of the principal decisions adopted by the conference, which proved to be of capital importance for the future of the economic development and social promotion of the governorate of Aswan, follows :



On the agricultural level, about 310,000 feddans will be reclaimed in the region of Kom-Ombo. The elevation of the plateaux of the region formerly made their cultivation difficult, but thanks to the High Dam it will now be possible to supply the area with the required amounts of irrigation water.

The re-organization of the cultivation cycle will guarantee a notable extension in the area set aside for the cultivation of cotton and sugar-cane, which will reach 83,500 and 70,120 feddans respectively.

To give a clear idea of the importance of this initiative, we should point out that the increase in the cultivation of sugar-cane will bring returns three times greater than the Suez Canal revenues.

A soil analysis will determine the most appropriate crops for cultivation. Studies will be carried out with a view to increasing the yield of the governorate lands. A research centre dealing with crops of tropical regions will serve this aspect of the question effectively, while the research centre for subterranean waters will guarantee more supplies of water, to be added to those provided by the High Dam. Meteorological observatories will help farmers for whom vocational training centres will be instituted.

Agricultural industries will be developed as much as possible and multiple studies will be carried out.

Lake Nasser, which will be formed south of the High Dam and which will extend over an area of 500 square kilometres, will constitute an important source of fish wealth. A centre for training fishermen will also be established. But the lake will also allow for other studies. The storage of the waters in the lake and the changes to which the soil of Aswan will be subjected following the formation of this immense sheet of water, as well as the evaporation of the water and the control of the lake are all questions which will be attended to by the experts, as soon as the construction work on the High Dam is completed and Nubia is inundated.

After the construction of the High Dam, the Nile silt will be deposited in the river bed. The construction of eight dams designed to maintain the slope of the river bed is envisaged. The first of these dams will be that of Selsela, at a distance of 80 kilometres from Aswan, and for which L.E. 48 million will be allotted in five years' time, the date contemplated for its construction.

Agricultural cooperation will be generalized for the benefit of cultivators who will receive select seeds and modern machinery for the judicious exploitation of their land, and will benefit from the research and experiments which the *ad hoc* centres will undertake for horizontal as well as the vertical expansion of agriculture. Handicrafts and domestic industries designed to raise in a substantial manner the income of the peasant will be developed, as well as animal husbandry, silk-culture and bee-keeping. Vast grazing lands will extend along the shores of Lake Nasser for the purpose of cattle breeding, for which diverse centres for select breeding and artificial insemination are envisaged.

Industrialization was undoubtedly one of the matters given the closest attention by the conference members, by reason of the immense energy potential resulting from the construction of the High Dam and the wide possibilities which come into existence with the industrialization of regional raw materials. Prospecting will be carried out in search for new minerals. The industrial projects alone are thirty, the main ones of which are :

An iron and steel complex with a potential of 300,000 tons, employing 2,500 workers.

A plant for producing large size metal plates, with a capacity of 200,000 tons annually.

An aluminium plant with a production capacity of 40,000 tons.

A foundry with a capacity of 30,000 tons.

A plant for aluminium bichlorate with a purity of 99 per cent. Capacity : 500 tons.

A plant for ammonium nitrate. Capacity : 2,700 tons.

A plant for phosphorous products. Capacity : 1,350 tons.

A plant for sand bricks. Capacity : 40 million tons.

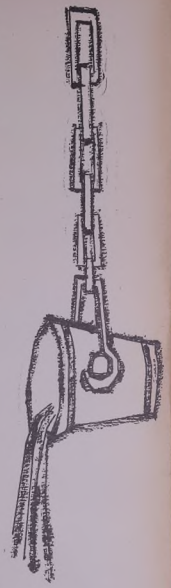
A plant for refractory (hollow) bricks. Capacity : 20,000 tons.

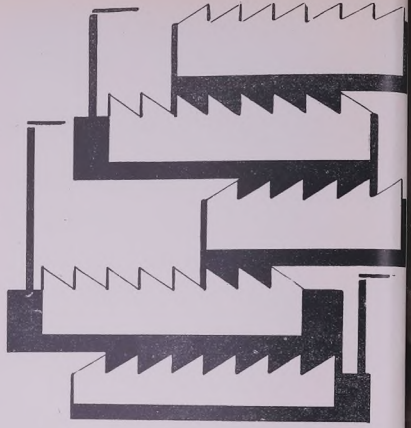
Several plants for synthetic wood.

The expansion of several already existing plants is also envisaged. This is the case notably with the Kom-Ombo sugar factory .

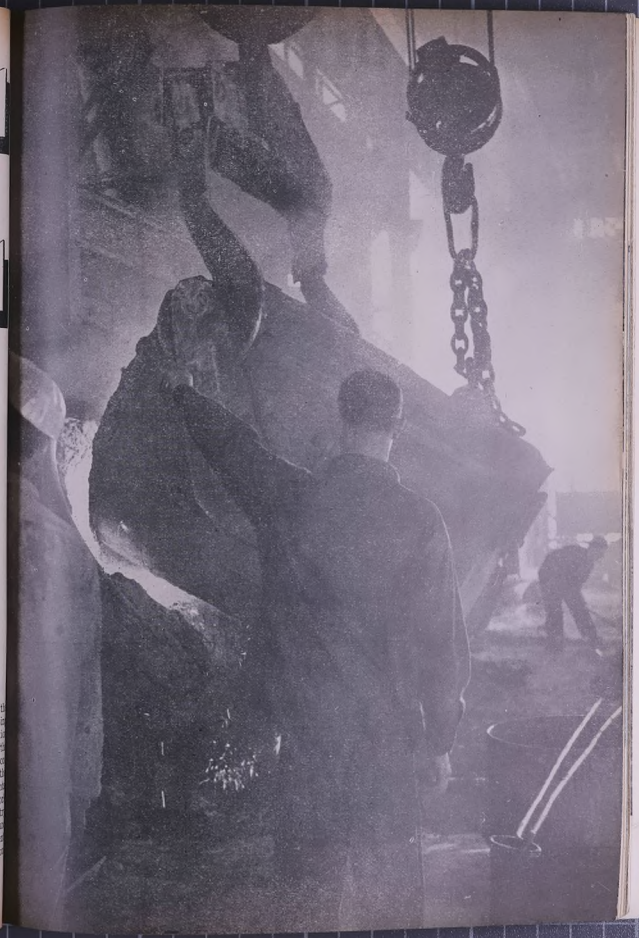
The exploitation of mines, mainly iron and phosphates, will be stepped up. Iron ore will be extracted at the rate of 500,000 tons annually and the phosphate at the rate of 650,000 tons in the first stage. Geological research for the discovery of new deposits of minerals will be carried out with the creation of a competent organization.

The basic structure was not neglected and various decisions were adopted concerning the development of roads and other means of communication and transportation. For example, the region of Aswan will be linked to the Red Sea, notably to the port of Berenice (which will be considerably enlarged), by a lig road network. The reconstruction of towns and villages in the governorate, with all the problems of town planning that this presents, was studied, as well as questions relative to technical education and vocational training, with the creation of adequate centres and institutes, etc. Social and demographic questions, the perfecting of hotel services, the arrangement and re-arrangement of archaeological and tourist sites were examined also.

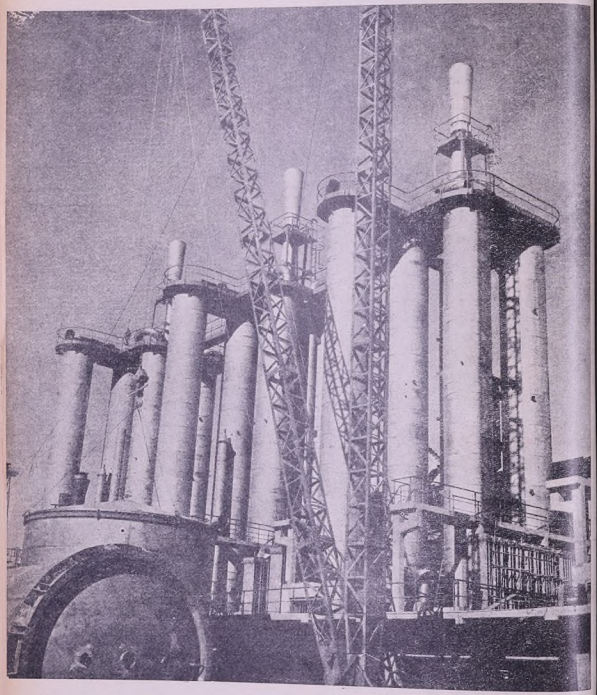


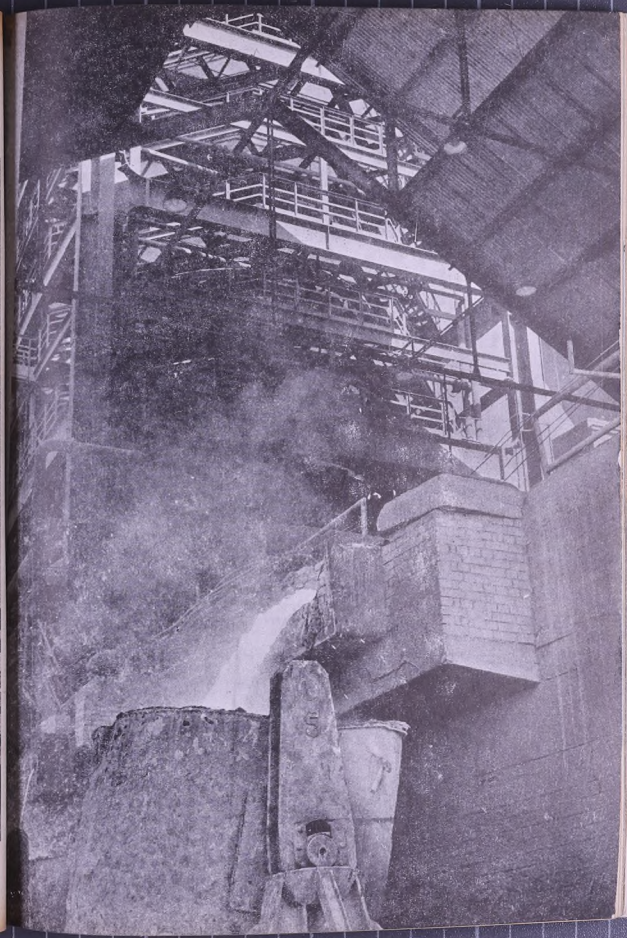


As can be seen, the task is considerable in the measure of th objectives aimed at. It requires a sustained effort, and research is goi side by side with the continual development and uninterrupted evolutio of the region. For all these matters will be effected on the basis of t study of local conditions and resources, human and material. The co ference members decided to meet again at the beginning of 1965 for th purpose of proceeding to an examination of new research, achievemen new possibilities and suggestions which will arise as this striking mov for overall development and general promotion goes on in a countr which, having once been one of the cradles of human civilizations a one of the most prestigious centres of artistic and cultural enlightenmen is now called upon to witness one of the major pilot experiments fro the point of view of economic and social reconstruction.



Eighty per cent of the electric energy produced by the existing Aswan Dam is consumed by KIMA's chemical fertilizer plant (below and right).





An old people in a new home

«The emigration and Resettlement of the Nubians»

The summer of 1963 saw a double migration, in reverse directions. In the United Arab Republic, 50,000 Nubians moved to a crescent of new villages to the north and east of Kom-Ombo; in the Sudan, about 60,000 Nubians moved south to a New Wadi Halfa, in a similar scheme to that in the UAR. Both groups of Nubians will be leaving before the waters begin to rise in the largest man-made lake on earth. Both groups will feel sorrow as they leave homes, theirs for centuries; both groups will also be aware that they will be moving to better land than they knew before. Their emigration is a necessary step if the Nile valley as a whole is to be rationally planned, with electricity flowing as a Nile of power throughout its length.

Slowly, the Nile steamer towing three barges sets off; on the rail stands a crowd of dark-faced Nubians dressed in white or black gowns, similar to the Egyptian «galabiah». With sad eyes and a feeling of uncertainty they look at the crowded shore where their friends and relatives gathered to see them off. Aboard the vessels are about one hundred Nubian families who are being transferred from their native Nubian village **Toshka** to a new country that will become their home. They will soon be followed by those who have just bid them farewell. Huge packages of food supplies, chests, baskets, clothes and furniture, make it difficult for anyone to move freely from one barge to the other.

But soon the passengers, who in many cases have never experienced a journey outside

their village, stop waving to their friends on the shore. What does the future hold for them? What does the new village in which they will live, look like? The steamer has now reached the middle of the eternal river and speeds up towards the distant town of Aswan, the first stop in this unique mass emigration operation.

What has happened to force the tall, well-built Nubians with their happy-looking faces, to leave their own villages in search of a new home?

They are threatened by the giant river that once was — and will later be — the source of all their wealth and prosperity. The United Arab Republic is building her famous **High Dam,** the « Sadd el-Aali », which in turn will be the source of new life and welfare for millions of the sons of the lower Nile valley. The first stage of the construction work will be completed during this month, with the opening of the diversion canal which has been dug in the steep rocky shore.

A few years later, the entire scheme will be completed and the Egyptian Revolution of 1952 will have completed its master-achievement. There will no longer be a Nile flood threat, nor will the matter of water required for irrigation and land development projects raise any problem. The vast desert will be changed into wheat or cotton fields and the ten milliard kilowatts of electric energy generated by the colossal hydro-electric station will contribute to a wider industrialisation. These are the main objectives connected with the UAR's development project « No. 1 ».

The advantages are enormous, and the number of citizens directly profiting from it is astonishing. But the construction of the **Sadd el-Aali** makes some measures necessary that influence the lives of several thousands of people. For the waters behind the new High Dam will rise about one hundred metres, it is thus clear that the banks of the Nile south of the construction site will be flooded. This means that the Nubian villages along the river banks will disappear under the yellowish brown flood water. The area in question is as large as the « Nasser Reservoir », the lake to be created by the accumulated waters, and will cover about 4,000 square kilometres, with a length of 600 kilometres.

The population in this district lives on both sides: the Egyptian and Sudanese regions of Nubia. Their number is not very large, as they count only some 60,000-odd persons within the Egyptian border. But this does not mean that they are without importance. On the contrary. The Nubians are one of the oldest African peoples, with a long history of which any people of the world could be proud. The UAR authorities are fully aware of this fact and are doing their utmost, not only to resettle them and safeguard their future, but also to care for the preservation of Nubian characteristics. Before going into details of this important action, it seems fitting to give first an idea of the history of a people scarcely known in Europe, though it bears witness to one of the most important elements of human civilisation.

The word **Nubia** is derived from the Nubian and ancient Egyptian term for **gold,** which sounded like « Nub ». In the first references, the Nubians were called « the people of Kosho. There are various theories explaining their origin; some historians are of opinion that they penetrated into the northern Sudan or the central Nile Valley coming from East Africa or even from Libya, whilst others say they crossed the Red Sea from the Arab Peninsula. It is difficult, however, to ascertain which of these assumptions is correct. It is well known, of course, that the Nubians existed before the unification of Upper and Lower Egypt under King Menes, i.e., more than 5,000 years ago. They occupied the Nile valley extending from the first cataract to the fourth cataract, and even beyond the latter as far as the Ethiopian highlands. It is only logical that they mixed, to a certain degree, with the surrounding peoples in Somalia, which was known in ancient Egypt as the « Country of Pont », Ethiopia and Libya.

The ethnic influence of the population of the Arab Peninsula and that of Pharaonic Egypt is also an established fact. King Sinfero, a Pharaoh of the 4th Dynasty, used thousands of Nubian slaves for the construction of the famous Sakkara Pyramid, and employed them in the Egyptian copper mines in Sinai Peninsula. During the reign of the kings of the VI century, relations between Egypt and Nubia were very close. Several commercial treaties were signed and the first « fact-finding missions » explored the Nubian region by order of the Egyptian Pharaohs, who consolidated their power and extended the southern Egyptian frontier as far south as the second cataract. Sesostris III successfully fought against the Nubian tribes, and made all of Nubia part of the Egyptian empire.

When in 1730 B.C. the Hyxos invaded Egypt and occupied its northern provinces for several centuries, many Egyptians preferred to

emigrate to the safe Nubian territory, where gradually a strong Egyptian community was established. In those days, the Nubians made acquaintance with the highly developed Egyptian culture and science. They imitated them and began to write their own Nubian language with hieroglyphic characters. Even the Amus-Raa religion found its way to Nubia, a fact shown by the many Egyptian-styled temples and tombs, and even pyramids, all over Nubia.

It was none but the Nubians who backed Prince Ahmes of Thebes in his war against the foreign intruders. After the expulsion of the Hyxos invaders and the revival of Egypt, which soon regained its former power and dominated the civilised world, Nubia developed rapidly and set up an independent kingdom with Napata as its capital. The Nubian kings must have been powerful, because the pharaohs of Egypt often called for their help in suppressing internal revolts or in repelling alien enemies.

The reputable historian Naum Shoqair tells us that one of the pharaohs of the XXI dynasty exiled a number of Egyptian priests who founded a dynasty of their own in Nubia, which was hostile to the Egyptian pharaohs. They were the founders of Napata, a kingdom which soon should have become stronger and greater than the declining Egyptian empire.

In 750 B.C. the kingdom of Napata invaded Egypt and occupied its upper provinces. The first kings of independent Nubia were extremely powerful, like Kashta, Biankhi, Shabaka, Tahraqa and Tanut Amun. The latter monarch was able to conquer Thebes and Memphis, by which he proclaimed himself the master of Nubia and Egypt. Details of this interesting episode are engraved on a stone found near Napata. The Nubian domination lasted until 308 B.C.

During the Assyrian and Persian epoch, a new Nubian kingdom came into existence, with its capital in Merowe. With the downfall of pharaonic Egypt and the establishing of the Hellenic-originated dynasty of the Ptolemean kings, trade between Egypt and Nubia flourished. King Argamenes of Merowe and King Ptolemaeus of Egypt reached a peaceful (and fruitful) co-existence between the two sister kingdoms. Gradually, the Greek influence was to be felt in Nubia, too, and the Greek language was used for most of the official statements and decrees.

When the Romans conquered Egypt, the Nubians felt that their kingdom was bound to

die if they did not resist with all their might. The Nubian kings therefore attacked the Romans several times, but were defeated and eventually fled to the south. The Romans chased them and destroyed Merowe, their capital. Nubia was later ruled by the kings of Ethiopia, and we lose track of the situation in Nubia until the foundation of the Christian kingdoms of Upper and Lower Nubia which were established about 600. The first kingdom, Upper Nubia, stretched from the Ethiopian mountains to the fourth cataract; its capital was Sobat (this name still exists; it was given to the Sobat river, an important tributary of the White Nile). Donkola became the capital of the kingdom of Lower Nubia, which occupied the banks of the Nile between the first and fourth cataracts. Even after the Arab conquest of Egypt in 641, the activity of these two Christian kingdoms continued to influence the surrounding countries to a great extent. The rulers of Egypt never attacked Nubia and the Islamisation of the Nubians took a long time.

It was only in 1505 that the last Christian stronghold in Upper Nubia was removed. After that date there were no longer independent Nubian States. The Nubian population mixed with the Moslem population of Egypt or retreated to the small towns and villages in that part of Upper Egypt and the Sudan which is today known as Nubia — an area bounded by the first cataract and the fourth cataract.

The majority of Nubians lived in the Egyptian towns where they lost their language and

costumes. The number of those completely Egyptianised was, for evident reasons, never known. The remainder of the Nubian population who still preserve their national traits, such as language, customs and costumes, are few; less than 60,000 persons in Egypt and about 50,000 in the Republic of Sudan. The Egyptian Nubians will, without exception, now have to abandon their own villages since the waters of the Nasser reservoir will rise by more than 60 metres at Abu Simbel, 30 metres at Wadi Half, (the Sudanese frontier station) and still several metres above normal level at a distance 600 kilometres from Aswan.

The Nubian population is being transferred to a new area near the town of Kom-Ombo, in Upper Egypt. They have been given all facilities to regroup themselves as a small but independent and, seen from the ethnic viewpoint, interesting community within the framework of the new society of the United Arab Republic. The authorities have coordinated the emigration of the Nubians and the reclamation of desert areas; the district where the new Nubian villages have been built will be the centre of desert reclamation work. Long and wide irrigation canals have been excavated, and thousands of modern dwellings, schools, post offices, hospitals, etc., have been built as to offer the Nubians every conceivable possibility of leading a sound and prosperous life.

President Nasser once said in an address to the Nubian population: « The benefits which the Nubian people will enjoy will indeed be great, for they will be brought together on proper and sound bases to build a strong and healthy community, thus doing away with the feeling of isolation. We are all members of one family and we shall bring you together as the people of the district which lived together in ancient times. We believe that your emigration from this place will be well organised, comfortable and centralised. You will be transferred from these villages, where you have been living, to new districts where you will be happy, free and prosperous ».

These words demonstrate the determination of the Revolutionary Government to solve the problem of the Nubian resettlement in an honourable manner. The Nubians will find contact with the world after having been isolated from their fellow-citizens in the other parts of the UAR.

That isolation — due to the non-existence of motor roads or railways connecting Nubia with the surrounding neighbourhood — had extremely dangerous repercussions on the Nubian people: the lack of hospitals and schools and factories created a serious situation; there were no means of treating the sick, educating the ignorant, or providing work for unemployed Nubians.

True, some of the ancient Nubian customs will disappear, the use of the Arabic language will be enhanced, but the real and direct profits will greatly offset unimportant disadvantages. The Government has sent university missions to Nubia with the object of studying their language (Nubians speak four dialects), their customs and habits, as well as their folklore expressions.

The **Ministry of Social Affairs** is now carrying out the necessary scientific planning, and has collected comprehensive data concerning Nubian families, individuals, their vocations, etcetera. The model dwellings have been built according to the wishes of the Nubians themselves, who were invited to inspect one model dwelling unit at Aswan and to make their observations, which were taken into account when the new villages in the Kom-Ombo area were built. Each dwelling consists of two or three rooms, an open yard and a kitchen.

We have mentioned already the Ministry of Social Affairs, but the execution of the Nubian resettlement project requires close cooperation between three other ministries: the **Ministry of Public Works,** which is constructing the canals, drainage systems, etc.; the **Ministry of Agrarian Reform,** which is in the process of reclaiming an area of 21,000 feddans in the Kom-Ombo district, and the **Ministry of Housing and Public Utilities** which is responsible for the construction of the popular and administrative dwellings.

The **State will pay indemnities for property which is lost,** which is further proof of the social and socialist character of this large-scale project. Furthermore, a good number of factories will be built, so as to provide the Nubians with the opportunity of joining the industrial era just like the other parts of the republic. These factories include a sugar-factory, a factory for preserving vegetables, a factory for drying and packing dates, a factory for drying and packing salt, a linen mercerator, a dairy and a unit for pasteurizing milk.

Vice-President Hussein El-Shafei, once said: « If the Nubian people are leaving their smaller home of Nubia for the prosperity of the republic and the realisation of the greater hopes pinned on the High Dam, then the bigger home — their own country — will open its arms to welcome them in one of its new districts in Kom-Ombo. Stability, prosperity and a decent life awaits them there ».

Prosperity, stability and a decent life have already been found by the Nubian emigrants,

in their majority, in the resettlement villages built in the region of Kom-Ombo.

When travelling to Aswan by train or by road, the eye is caught by beautiful blocks of stone which stretch over hundreds of metres in the middle of the greenery and the arid desert, inviting the latter to be fecundated and turned into fertile land, a source of life and prosperity. These are the resettlement villages of the Nubians.

« Why has this particular region been chosen for this operation? » we asked Mr. Hilmi El-Sayed Moussa, Director-General of the departments for the transfer and resettlement of the Nubian population.

« Many considerations », he said, «prompted the choice. The climate and the mountainous setting resemble those of Nubia. In the second place, the soil is virgin and favourable for improvement and allows greater possibilities for horizontal expansion, appropriate to meet the perspectives of long-term development. Then there were already Nubians who, in the past, had left their region and were established near Kom-Ombo. Lastly, this zone has a thin demographic density. If a large population were already installed there, it would tend to regard the migrant Nubians as 'intruders'. Now, in Kom-Ombo, there is a place and room for everyone. The village of Fetira, where Nubians had been established for some time, welcomed, with warmth and joy, the groups of their transferred congeners.

« In the possibilities of agricultural work afforded by the development of desert regions, it would be fitting to add to the considerations which prompted the choice of Kom-Ombo, the perspectives which open out with the creation of new industries in the governorate of Aswan.

«The transfer-resettlement operation affects more than 50,000 Nubians who will all be installed in their new villages before the end of June of this year. By the middle of May, 42,000 Nubians will already have benefitted from this operation.

« The operation, the total cost of which is L.E. 30 million, including the buildings, the improvement of land, initial expenses, indemnification and services, has been the subject of most detailed studies », Mr. Hilmi El-Sayed Moussa said: « The studies started in 1960, and the execution in 1963 ».

« In any case », he added. « you should not be deceived into thinking that the operation is that easy. It is not merely telling the people: Your lands will be flooded by the waters of the High Dam... You will therefore have to leave this place... We have built villages expressly for you...

« The question crops up in an entirely different form. There is, first of all, the psychological problem. It is the question of a community that has been established for thousands of years; it has deep roots, sentimental and physical ties. Their dead are buried there, and the very spirit of the community is tied, so to speak, to the soil. When one moves out simply from one flat to occupy another, he feels sorry. Hasn't the poet said: 'Even the most well-wished changes are most sorrowful...' all the more to men bound and tied to their ancestral land.

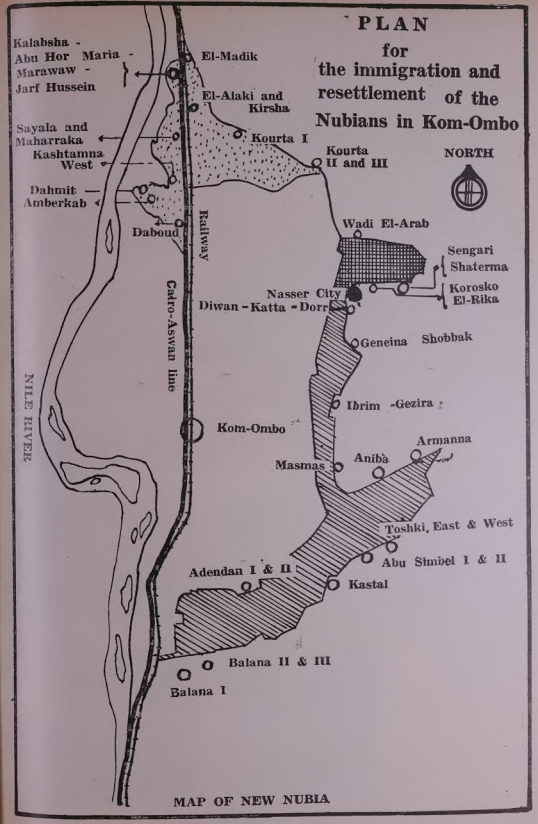
« But this is only one aspect of the problem which, besides, called for understanding and forebearance and psychological sympathy because resettlement should be accepted of one's own accord, and should have the consent of those concerned, to whom should patiently be explained the reasons for the transfer and the new conditions which have been laid down for them.

« Nothing has been done without associating with it the people concerned. This is an essential point. For example, we built a model house of the type to be constructed in the new villages of Kom-Ombo. We showed it to the Nubians and invited them to inspect it and give us their opinion. And in actual fact, the plan of this pilot-accommodation was modified according to the remarks and wishes of the settlers.

« Committees were formed and meetings organised to allow the exchange of brotherly views on all questions relating to the transfer-resettlement operation. The advice of everyone was solicited and each expressed himself in complete frankness. The result of those contacts and discussions helped considerably in the realisation of the project. We have somehow been applying the principle of collegiate management since 1960, the time when we started studies and sociological and technical research in preparation for the execution phase of the operation.

Experts from all sectors were associated with it and nothing was left to chance. Hence the success of the venture, concerning which the Nubians are today unanimous in voicing satisfaction.

« However, the aim was not only to move a population from its home; it was also to pro-



pare it for new tasks in the framework of general national action of economic re-establishment and social promotion. At the time it is changing its residence, the Nubian community will undergo a socio-economic evolution and adapt itself to new conditions of life.

« The question also includes an aspect which is new and adapted to the Nubian community. It is accepted that many Nubians customarily leave their native villages and their « homes » to seek employment in Cairo and in large towns, because of lack of sufficient subsistence means. They visit their native homes only once or twice a year. The rest of the time, the wives and children stay alone. The family is constantly separated. This is why the operation of transferring and resettling the Nubians is at the same time a move for 'family stability'. On finding employment in the new regions of Kom-Ombo, the man can settle down in a place and live with his wife and children. The large superficies, whether amended or to be amended, and the new industries which will be introduced, will operate a kind of 'return to the land'. Instead of being continually engaged as porters or hawkers in large towns, a quality of non-productive workers, the Nubians will re-join as a whole their families and be usefully occupied, by tilling the land given to them or by working in factories. This is of interest, as we see it, both to the individual and familial plan and to the collective plan ».

To prepare the Nubians for their new life and for the activities which they would be called upon to undertake, a big technical training programme was introduced in 1960.

Nothing, in fact, has been overlooked. Each problem has been carefully studied and the solutions worked out. Every difficulty met was examined and overcome.

The system of collegiate management was also applied in the new resettlement regions. The principle, we understand, is general in the Republic. But here it is applied in a somewhat original manner, adapted to the Nubian realities. For example, there have been established societies of social bearing in every village which will occupy themselves with questions of common interest (garding of sports grounds, maintenance of roads, etc).

Of the 40 original Nubian villages, 33 were replaced in the « New Nubia », and carry their former names. The capital has been given the name of « Nasser ». Thirty thousand feddans of land were improved or are under improvement.

Each village comprises from 300 to 800 dwel
ings, each house consisting of two, three o
four rooms according to the position of th
family.

Over and above the 30,000 feddans alloca
ed to them, the Nubians will benefit from othe
productive projects, such as the construction o
five large factories at Kom-Ombo (a sugar re
finery ; a vegetable canning plant ; a date dry
ing and packing factory ; a textile mill, and a
dairy pasteurization unit). Tourism will also b
an important source of revenue for the popu
lation of « New Nubia ». Rural, artisan and do
mestic industries will be introduced and deve
loped to increase family incomes and help to
wards raising the standard of living.

On its part, the Sudanese Government re
cently commissioned a British firm to take par
in a scheme to build « New Halfa » on 3,00
acres of land at Khashm al-Qirba, seven hour
journey north-east from Khartoum. The 60,00
people to be displaced will be housed there in
36 new villages, comprising 250 houses each.

On November 8, 1959, the UAR and the
Sudan signed an agreement whereby the former
would pay the latter 15 million Sudanese
pounds in compensation for the damage caused
by the backing up of the High Dam waters.
(The UAR paid the last instalment of 4 million
pounds in January, 1962).

The Sudan Government chose Khashm al-
Qirba in 1960 as a good spot for the resettle
ment of the displaced Nubians. It is a rich
agricultural area, at present sparsely populated.

Development of the area includes building
a dam at a cost of 8 million Sudanese pounds
to store 1,300 cubic milliards of water with a
generating capacity of 7,000 kilowatts. The
water stored will irrigate about half a million
acres of land.

In view of the fact that sugar cane cultiva
tion proved successful on the government's ex
perimental farm in the area, plans include the
establishment of a sugar factory on 45,000
square metres.

The Nubian resettlement, as we see it, is
a large-scale operation, conceived and execut
ed under the most favourable conditions in the
interest of the community concerned which to
day finds the most propitious conditions for a
new life characterised by stability and pros
perity and based on the efforts of everyone for
the benefit of all.

A LARGE-SCALE OPERATION
As work is actively progressing on the High Dam, an equally important job was being taken care of, 200 miles to the north of Aswan, namely, building a new home for the Nubians.

For both old and younger generations, a new and modern home awaits them.

Leaving for their new homes.

Nubian handicraft attract many tourists.

Nubian children will now go to hygienic schools.

THE

ARAB REVIEW

AN ACCOMPLISHMENT PLACED AT THE DISPOSAL AND IN THE SERVICE OF MANKIND

by Dr. ABDEL KADER HATEM,
Deputy Prime Minister for Culture and National Guidance
and Minister of Information, Tourism and Antiquities.

May 1964 (ASWAN)

The dissemination of culture has, parallel with the introduction of free education for the various stages, been one of the major preoccupations of the Revolution. An uninterrupted effort, extending to the entire cultural sphere, has been deployed so that the radical reforms carried out in the political, economic and social domains can be built solidly and fully comprehended by the masses.

Like education, and perhaps even more so, culture, before the Revolution, was one of the appanages of the well-to-do or middle classes. The people were systematically kept out of all cultural and artistic activity. Ignorance, carefully nurtured, constituted, in the eyes of feudalism, the rampart and the safeguard of its privileges.

The task to be undertaken was, in those circumstances, considerable and important. It was necessary to act quickly and decisively to allow the popular masses to catch up with the realities of the twentieth century and assimilate a harmony of knowledge and scientific, artistic and other data, which every man must possess or forever remain outside the stream of national and international life.

The process was of interest not only to youth, whose adaptation to it might appear relatively easy, but also to adults, the victims of a cultural ostracism. It was necessary to place at their disposal means to enable them to establish themselves immediately in the century. The natural qualities of these people, whose forefathers were the originators of human civilization, united in rational planning, and taking into consideration all aspects of the question, permitted the realisation in the shortest possible time of the objectives of this decisive campaign, designed to promote both individual and national development.

The humanist character of our Revolution made this operation imperative, both for the individual and the collectivity, particularly in regions which, like Aswan, are undergoing total re-shaping and intensive industrial development

The marvel of the High Dam and the matchless relics of the ancient and most admirable civilization, some of which are destined to disappear for ever under the waters of the High Dam, have together with the ideal climate of Aswan, attracted a considerable number of tourists. It thus became necessary to plan hotel and tourist accommodation expressly for that region parallel with the plan for the whole of the Republic, to meet the considerable development of tourism in the UAR in recent years.

The safeguarding of the historical monuments of Nubia has not been the least of the preoccupations of the authorities, who launched, conjointly with UNESCO, an international campaign aimed at moving the largest possible number of Pharaonic temples elsewhere, to make them safe from the waters of the High Dam. Excavations are also being carried on throughout Nubia in search for other relics of the past. International cooperation has so far found excellent ground for asserting itself and for winning fame by the saving of the masterpieces of an art which interest the human community in its entirety.

By its dual action of building the High Dam and safeguarding its marvellous archaeological remains, the United Arab Republic renews its tradition of a great builder, and displays equal care for the material development of mankind and for the artistic and spiritual values which, at all times, animated the ancient land of Egypt.

Abdel Kader Hatem

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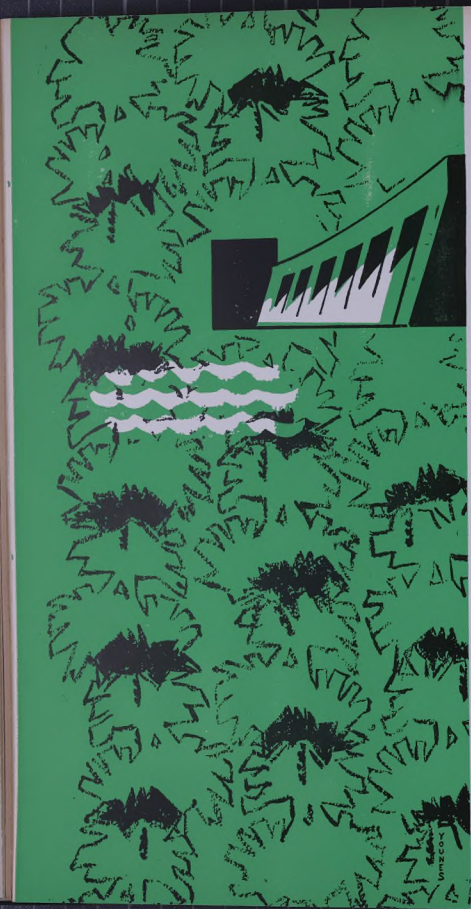


ASWAN

THROUGHOUT

THE AGES

The renown of Aswan goes back far in history. In fact, we can even affirm that it goes back prior to history. Have they not uncovered remains of the stone age, mostly in the village of « El Sabil, » close to Kom-Ombo ? Other remains and reliefs of the same era have been discovered in the village of El Kattara, north of Aswan, and are at present exhibited in the museum of this city.

Two of the museum halls are devoted to objects of the pre-dynastic period. Among these antiquities are potteries, necklaces and, notably, paddles made of slaty rock, of which one is formed in the shape of a rhinoceros, and combs decorated by two giraffes, one big and one small. Amulets in the shape of scorpions are found in abundance in this hall.

Already under the old Pharaonic Empire (30 centuries before the Christian era) the Royal Envoys *came to take from Aswan's quarries the stones destined for the king's sarcophagus. Aswan soon entered into an era where the industry of stone and granite cutting flourished, to satisfy the needs of the construction of temples and obelisks. We know that the latter were cut from the red granite of Aswan. Their extraction, transportation and erection posed technical problems on which we are still poorly informed. They weighed several hundred tons ; the biggest among them (the one which has remained uncompleted in the quarries of Aswan) weighed one thousand tons.*

The early Egyptians settled at Elephantine. Being an island, it was just the right thing for a small tribe wanting to defend itself against wild beasts or intruding enemies. It was then called « Yebo, » which means « Land of the Elephant. » It is still not known whether this name was conferred upon it because the Egyptians found elephants there, or because the tusks of this animal were on sale there.

Elephantine was the principal region of the first « nome ». Its god, the ram Khnoum, was the prince of all the rapids' zone. Aswan (it was then called Suwanu) was then

only the market of Elephantine island. If we take into account that the water which separates them is 150 metres wide, we are inclined to believe that they were very much bound together, to the point of being mingled. Near there is situated the sacred gulf which, in the eyes of the Ancient Egyptians, gave birth to the floods. An ancient nilometre — renovated by the Romans and more recently by the Khedive Ismail — still stands at the side of the island. In the course of its history, Elephantine island saw constructed on its grounds great and majestic temples, notably those of King Thotmos III, Ramses II and Amenophis III.

Aswan was, under the Pharaohs, an important strategic point commanding, by the surveillance of the cataract and the routes leading to it, the commerce by river and desert caravans. At all times the administration of the Pharaohs maintained there an important garrison of national soldiers or mercenaries. It was under the command of the explorer princes, whose tombs are perched on the elevated western bank, that these soldiers went out on exploration expeditions, as a result of which some of them reached Bahr El Ghazal. We refer, particularly, to the voyages of Prince Khouf Hour (32 centuries prior to our era), one of the first explorers of known history.

For long centuries Aswan was in a certain way a fortress defending Egypt against assaults from the south. It was with the help of this wonderful city that Auhmoss (1635 B.C.), the founder of the 8th dynasty, was able to drive the invaders out of the whole of the land of Egypt.

As for Philae, whose death was sung of yore by Pierre Loti, it was only during the reign of one of the last Pharaohs, Nectanebo I, that this green island in the midst of an immense circus of sombre and dead mountains saw erected its first edifices.

UNDER THE GREEKS AND THE ROMANS

Under the Greeks and the Romans, Aswan, which had become Syene, was able to preserve its historic importance. Its quarries were then passing thorugh a period of full activity. The Syenite (a term employed by the Romans from the first century B.C. to denote the granite of Aswan) was then sought not only for Egypt but for the rest of the Empire.

In the Greek era Syene had fame of another kind ; we find a shaft whose walls were lighted vertically by the sun rays on the day of the summer solstice, by virtue of its position in the neighbourhood of the Tropic of Cancer. At the time they believed it to be situated exactly on the Tropic of Cancer (even though its distance is 37'23" below this line)

and this opinion caused it to be chosen by Eratosthene as the starting point for measuring the surface of the earth (230 B.C.).

We should also remember that it was to Syene that, under the Emperor Trajan, the Latin satirist Juvenal was sent in disgrace to assume there the command of a troop, and that he gave vent to his ill humour in a well-known satire.

As for Philae, it had its full glory under the Romans. The Emperor Trajan built there a great temple which bears the name of Kochke.

Aswan has also played a great role in the propagation of Christianity. It became, in effect, an asylum for the

priests who fled the religious persecution which reigned in Rome. In the first centuries of Christianity, Syene became the headquarters of a bishopric. From there Christianity penetrated into Nubia and Sudan. Certain Nubian villages still bear names of Christian origin, such as Thomas, Marie, etc...

ISLAMIC ERA

The importance of Aswan was consolidated in the Islamic era, when it acquired a great cultural fame. Several schools and institutes were constructed and famous scholars and philosophers taught there, notably Ismail Ben Mohammad Ben Hussein El Ansary, who died in 599 Hegira.

The fame of Aswan was prolonged under the reign of the Fatimids, some of whose scholars conceived the idea of the creation of a dam which can be compared, up to a certain point, to the present dam.

However, after a period of prosperity which may have been the most celebrated since the Arab conquest, Aswan had to suffer its share of the troubles which followed the extinction of the Fatimid dynasty. Taken and retaken, sometimes by the Awenos or Barabra of Lower Nubia, sometimes by the Huwara of Upper Egypt, it did not offer anything but ruins.

It did not fully recover life again except when Selim, after the conquest of Egypt (1517), placed there a Turkish garrison. A few decades later it was linked to the port of Izab on the Red Sea and became a commercial centre, whence departed the traffic for Yemen and India.

In the 18th century Aswan distinguished itself by the fact that it remained the only independent zone after the invasion of Egypt. This city, in fact, resisted the attacks of Desaix, who admitted himself defeated.

REMAINS AND MONUMENTS

The most important temple in the region of Aswan is incontestably that of Abu Simbel, situated in the village bearing the same name. It was constructed by Ramses II and was cut into the mountain itself, which denotes great progress in the art of construction. Two colossal statues of Pharaoh decorate the entrance to the temple. The battles of Ramses II and his victories are depicted in carvings on the walls of the temple.

The city of Aswan itself has only a small temple, at a distance of about 100 metres from the banks of the river, on a small hill of ruins to the south of the city. This temple, devoted to Isis, is composed of a small pronaos, opening upon three small chapels. The paintings which decorate the facades are the ordinary scenes of offerings. The personage in adoration is the king Evergete Ist, whom we sometimes see accompanied by queen Berenise, his wife, before different gods: Amon, Amon-Min, Mut, Isis, Thot, Harsiesis and the local divinities. The interior of the temple encloses the supports of the sacred barges.

The rocks of Aswan, like those of Elephantine, are covered with inscriptions, some of which date back to the Ancient Empire (25 centuries B.C.). They are, in general, inscriptions of adoration of the gods of the cataract, the ram god Khnoum and the goddesses Satet and Anouqet.

The temples of Elephantine island, Philae and Nubia, and the whole province are too numerous to discuss in the present article. Our readers will find details related to them in another article in this issue.

1

At all times, Egyptians **travelled** up and down the great river in sailing boats, known as «feluccass».

2

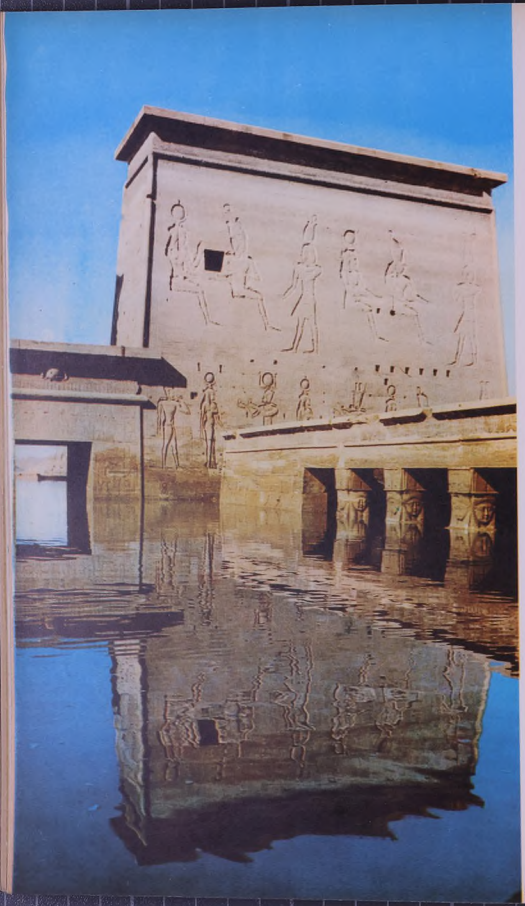
The famous Temple of Isis on the island of Philae; a harmonious combination of architecture.

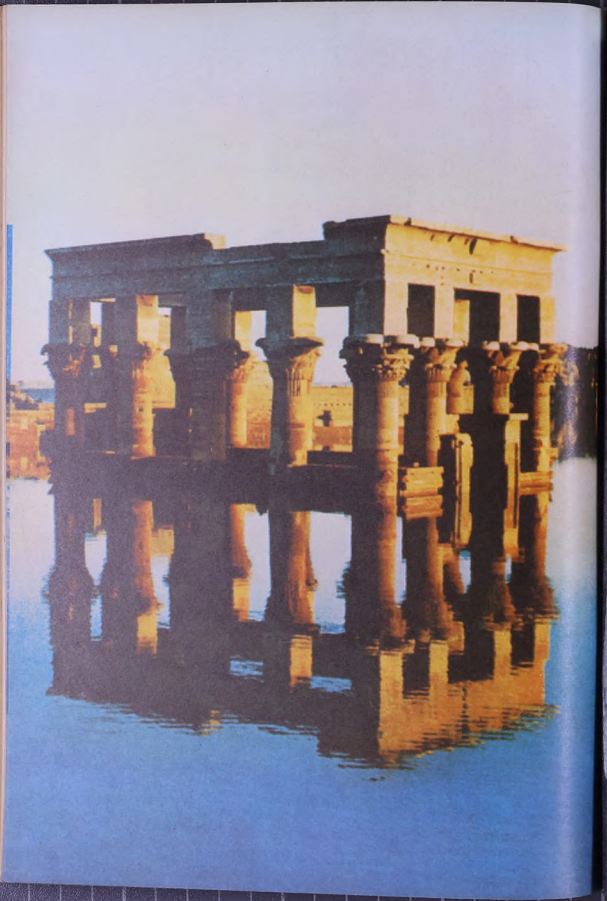
3

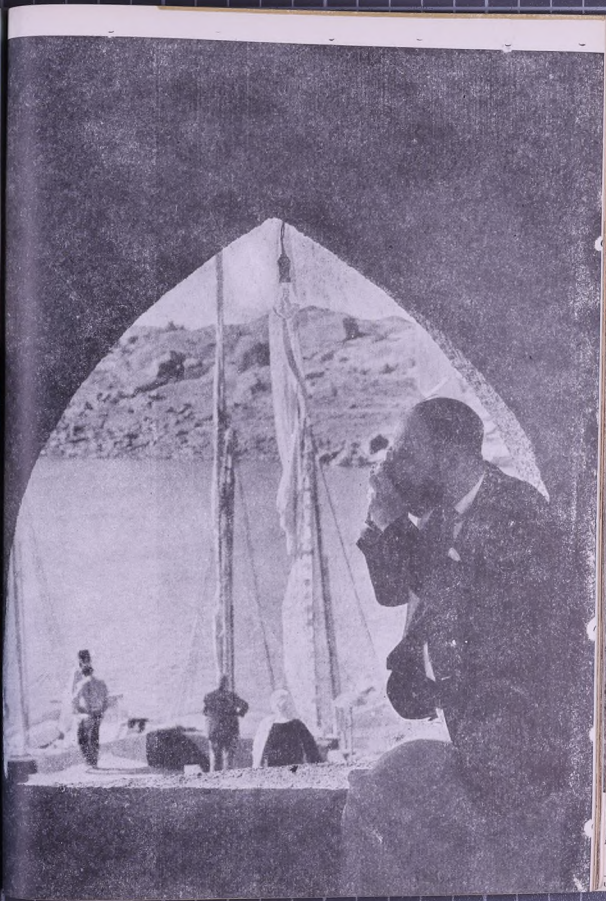
A granitic landscape and the mausoleum of the late Agha Khan, the spiritual leader of Pakistan.

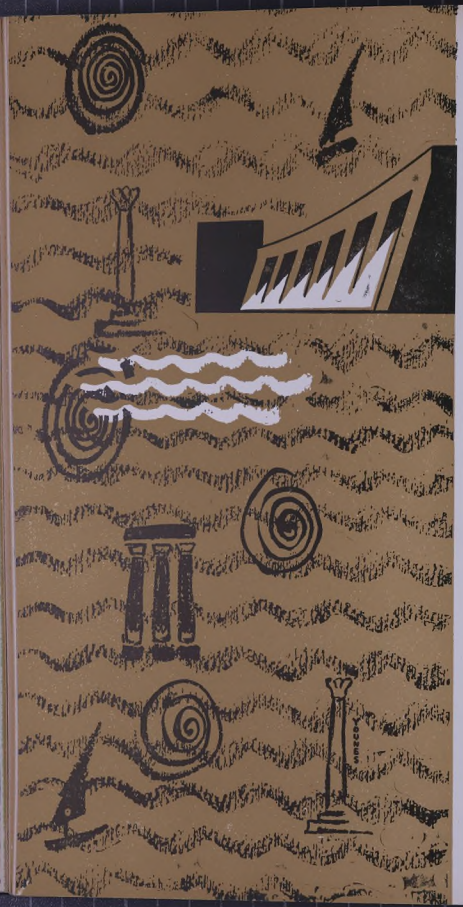
4

The «Kiosk» of the Emperor Trajan. Here, Queen Cleopatra once strolled under Philae's acacias and palms.









ASWAN ADAPTS ITSELF TO NEW REALITIES

Emerging from secular oblivion due to the construction of the electric-power station at the old dam, the construction works on the High Dam and the intensive industrialisation efforts, Aswan has had to carry out an extensive programme to accustom the population to the new conditions. It had to achieve a fundamental conversion to place it in a position to meet the demands of the new task and the prominent role it has suddenly been called upon to assume at the level of modern development.

One method for bringing about this conversion suggested itself: the dissemination of information on the widest possible scale supplemented by appropriate training of the masses who were being called upon to make a gigantic leap forward. A massive popular education programme was indicated, and this was undertaken under the direction of a man who has proved himself to be a dynamic and bold leader whose achievements in the field of culture and information

are countless : Dr. Abdel Kader Hatem, Minister of Culture and National Guidance. The Minister was assisted in this great effort by a man with broad conceptions of the future, a man working in silence : Mr. Ibrahim Khalifa, director for three years of all the services of the Ministry of Culture and National Guidance for the governorates of Aswan and Kena.

The task to be undertaken was immense, more so because it had to start virtually from scratch and yet be deployed in a sweeping and rapid manner.

Mr. Ibrahim Khalifa received us at his office on the bank of the Nile, where he has spent long evenings drawing up plans for long-term and short-term projects and perfecting the infinite details of the exciting work to be realised.

To grasp the magnitude of this task, a quick glance at the steps already taken by the city and the governorate of Aswan is imperative. From 30,000 inhabitants in 1952, the population of the city of Aswan has grown to 130,000 inhabitants (March, 1964), increasing at an accelerated pace since the beginning of construction work on the High Dam in January 1960, and the establishment of the industrial basic structure.

Aswan has at all times occupied an important strategic position with regard to the irrigation operations which control the waters of the Nile. This, in particular, is the reason why the dam was built there in 1902 and why today the High Dam is being built near the same spot. The hydro-electric power station opened in 1960 is, for the present and will be until the High Dam power station is completed, the heart of the budding industry of Aswan and all that this entails by way of demographic influx and urban development. The present dam power-station supplies the immense High Dam work site with electric current. It also feeds the factories which have come into being during the past few years, the largest of which is, incontestably, the Kima fertilizer plant, the most important of the Middle East group with a daily production of 1,600 tons, plus by-products. Kima is to be further enlarged to satisfy the greater part of the country's requirements of ammonium nitrate fertilizer. Its sales have risen to L.E. 12 million annually, allowing the country to save L.E. 10 million annually in foreign exchange. This illustrates the importance of the electricity generated by the Nile waters for Aswan and for all the Republic, an importance which will grow considerably with the construction of the High Dam power station which will produce 10 milliard kw/h annually, enabling industrialization to spread to all governorates.

Also, because of the High Dam, Cairo and the delta area will be supplied with electricity at a very cheap rate (five milliemes per kw/h). At Aswan the kw/h now costs 10 milliemes, including taxes, as against 28 milliemes in Cairo.

The electric power generated at the High Dam will be largely used to industrialize Aswan. Two new sugar-refineries have been built, also a plant for manufacturing synthetic wood from sugar cane-pulp, and a phosphate fertilizer plant at Sebaiya, north of Aswan. An important metallurgical complex will be established at Aswan in the proximity of the High Dam, with a productive capacity of 300,000 tons annually. Numerous chemical industries are envisaged and will be fed by the High Dam power station.

* * *

This great industrial development made it necessary to bring about a popular awakening, a guiding of the masses to a sector of activity hitherto unknown. As we have already stated, the governorate of Aswan was, before the start of work on the High Dam and the construction of the power-station at the present dam, practically cut off from the rest of the country, living in a sort of vacuum.

As recently as 1959 Aswan was isolated from Cairo. The morning newspapers published in the capital did not reach

Aswan until 11 p.m. and were read only the following morning — if they still had any interest after this long delay. Even the radio was not heard in the governorate. Two things were imperative to break this isolation : to see that the papers were distributed and read at the same time as in Cairo and the delta ; and, to reinforce radio broadcasting. Through the measures taken by Dr. Hatem, Aswan was «linked» to the rest of the country, and the population was removed from its isolation. These were the first elements in the task of training and information, the indispensable initiative to stimulate the awakening of the masses and make them receptive to the action of development of which they are the makers and the beneficiaries.

A great information movement was deployed for the purpose of enlightening the population and enabling it to

Mr. Yehia Abu Bakr, Under-secretary of State for Culture and National Guidance

Mr. Ibrahim Khalifa

realise the objectives of the Revolution and the aims of the country's economic development, with the implications of this progress on the social level : creating a democratic community characterised by equality and self-sufficiency in everything.

Today, we can say that there is, throughout the governorate, a complete awareness of the objectives of the Revolution and a full understanding of the economic and social promotion. This consciousness, this awakening, would have been incomplete had the masses themselves not felt wholly concerned and associated with the collective effort. It was thus necessary to stimulate this new understanding, which is the true guarantee of the psychological evolution of the masses, conscious themselves of the necessity to work for their own promotion and for the common stepping up of a collectivity which is spreading rapidly. This stepping up cannot be well deployed unless it is founded on adequate comprehension and appropriate psychological action of training and information. This was the most important and the most urgent task. It was thus that the first « Palace of Culture » in the country was established at Aswan, with the aim of offering the masses programmes of an educational and cultural character, along with basic training, not of the formal type but of a « recreational » nature, interesting and attractive.

This « initiation » had to be assured in the first place for adults, for those « grown-ups » who had not had the opportunity to be educated and on whose shoulders rested the greater part, if not the whole, of the effort of development and reconstruction. In a manner of speaking, « psychological integration » had to be undertaken. The complex of non-education or faulty education had to be eliminated by slow and patient action, conducted with tact and understanding.

The Palace of Culture soon played a predominant role in the city and became the centre of dissemination for cultural, educational and artistic efforts in the governorate. Parallel to the professional manual culture, courses of adaptation and education, and cultural and artistic activity were deployed. Amateur theatrical troupes and orchestras were formed, groups of painters, designers and sculptors were organised. Exhibitions, stage plays, projections of features and documentary films, concerts, etc., took place in great numbers, illustrating the many forms of art, regional, national and international. The Book Exhibition was a great success, to the point that it was impossible to admit all the people wanting to see it. Some plays and films had to be performed several times. During the first three months of this year alone there were 30 presentations of plays, concerts, operettas etc. Four regional dramatic art troupes were formed at Aswan comprising workers, farmers, students and professors. They appeared regularly in various plays, revealing definite talent and arousing great interest. Regional dramatists even wrote plays which were performed with success and occasioned lively exchanges of views on their subjects.

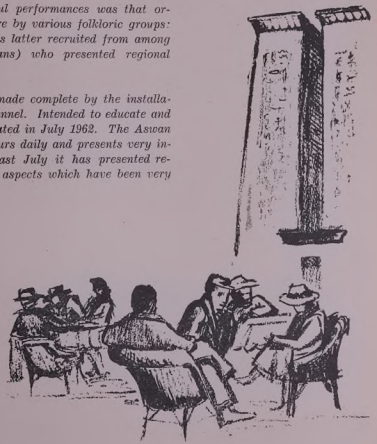
For the worker in the plant the Palace of Culture provides adequate education of a recreational character, which interests him, is useful to him and attracts him.

A permanent exhibition is visited by young and old alike. Here, they find a well-trained staff capable of satisfying their deep curiosity. These men and these women, these young and these not so young, in whom no one seemed to be interested, find today an attentive ear which satisfies their thirst for seeing and knowing.

The « culture caravan » mobile unit comprising a library, equipment for projecting films, a theatrical troupe, an exhibition etc. tours the villages and the most remote regions of the governorate.

One of the most successful performances was that organised at the Palace of Culture by various folkloric groups: Nubian, Saidi and Russian (this latter recruited from among the High Dam Soviet technicians) who presented regional songs and dances.

This culture mission was made complete by the installation of a regional television channel. Intended to educate and divert at home, it was inaugurated in July 1962. The Aswan television channel works six hours daily and presents very interesting programmes. Since last July it has presented regional programmes of multiple aspects which have been very



successful with the viewers, being a most effective instrument in the matter of popular education.

Meanwhile, the radio broadcasting services have been greatly reinforced, increasing contact with the rest of the country.

TOURISM

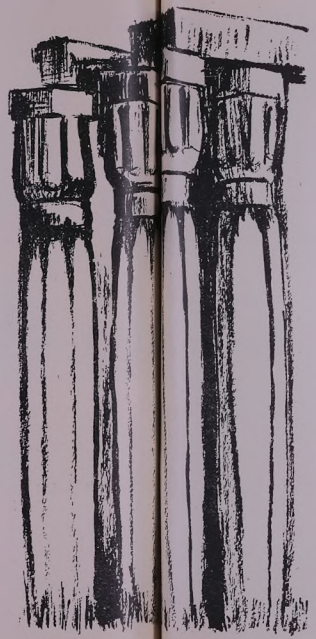
A city with a rich past and a promising future, Aswan has become, in the last four years, one of the biggest poles of attraction for foreign tourism. Visitors come to it in ever growing numbers, as much to admire the enchanting remains of the oldest civilization which stretches near Aswan, as to see one of the greatest works of engineering art in the world being constructed.

Until quite recently, only a small minority of tourists went to Aswan. They went for a fairly long period of time to enjoy, in the winter-time, its particularly healthy climate and its ever bright sun, and also its magnificent natural scenery, where green islands and basalt rocks jut out of the Nile, looking in the moonlight like prehistoric animals. Some of them took advantage of their proximity to Luxor to visit the majestic temples and the Valley of the Kings. A single hotel seemed sufficient for these tourists, coming from Europe and America.

But the great leap made by Aswan with the construction of the High Dam and industrialization, brought an influx of tourists of all categories from all countries. It was thus necessary to conceive a plan for hotels and other amenities. The tourist services were not up to standard. They lacked stability. The big travel and tourist agencies did not have offices at Aswan, and the offices set up by certain agencies to overcome this deficiency were inadequate. The owners left the city and closed their offices whenever they felt like doing so, with no regard for the tourists.

The continuity of tourist services is a matter of capital importance. On the initiative of Mr. Ibrahim Khalifa, a local agency was established under the name of « Nile-Aswan », which has already done much to remedy this situation. Today we do not find the tourists waiting at the railway station for someone to see to their accommodation, as used to be the case when all the agencies had one single representative at the station. Understandably, he could not handle all the visitors at once. When one arrives now at Aswan railway station one gets the impression of being at an important touristic centre, well equipped with well organised services.

The swift, daily air link between Cairo and Aswan has greatly facilitated travelling, and the new sleeping coaches, with all modern refinements, make the railway trip most



agreeable. The dust which used to annoy and discourage travellers does not penetrate the coaches any more.

An extensive plan of hotel construction is being carried out at the moment, and has radically transformed the face of the city. Beside the « Cataract Hotel », called today the « Old Cataract » by its frequenters, an ultra-modern nine-storied hotel building has been erected. Close to the railway station is the « Abu-Simbel » hotel, just completed. This will accommodate the distinguished guests coming for the ceremony at which the Nile waters will be switched to the diversion canal.

Facing the old and new « Cataract », there is a beautiful island with lush vegetation, in the centre of which a large white building with terra-cotta coloured blinds is being set up today on a small hill. This island — the island of Amoun — will become next month a luxurious tourist centre with swimming pool, sports grounds, dancing, shows etc.

A second tourist centre, « Nile City », will be built on another island. It will include bungalows and all the amenities which today's tourist loves and dreams of finding. It will have sand-baths, which are beneficial for the body. About thirty years ago a German doctor used to recommend the sand of Aswan for his aged patients, and obtained extraordinary results. The sun and the climate in Aswan have almost miraculous benefits. A « children's city » will also be established. The rates in these centres will be quite reasonable. Full-board stay in the « cities » will not exceed 260 piastres per day.

To illustrate the extent of the touristic « boom » in Aswan we have only to quote the number of tourists patronising one hotel in the city: from 7,000 guests in 1961 it catered for 27,000 in 1963, a figure almost quadrupled for one single establishment. We can better appreciate the importance of the tourist movement when we know that most of the newer hotels were not there one year ago. Yet tourists today sometimes find difficulties obtaining accommodations. This indicates the urgency and importance of the current hotel construction programme. The « New Cataract » has 140 beds, the Amoun Island hotel 72, the « Abu-Simbel », inaugurated this month 140, while the « Elephant-Hof » will have 130 rooms.

Despite the increase in the number of hotels, all are completely booked until the end of April. The hotels will also remain open in summer ; previously, they were wont to close up at this time of the year.

Interior travel, practically non-existent in the past, is

now spreading fast. Government rest-houses, schools and camps are full up during vacations and at various other times of the year.

The movement to save the Abu-Simbel monuments has aroused world interest and brought an influx of tourists from all countries. It was necessary there, as well, to assure adequate service for travel and accommodations. Two hydrophiles make a two-way daily trip between Aswan and Abu Simbel (280 kilometres) and reservations for seats have to be made several days beforehand. Two big boats, « floating hotels », the Isis and the Osiris, also make regular trips between Luxor and Aswan. This journey to some of the most magnificent archaeological sites is a very pleasant cruise.

On the shore of the Nile at Aswan a beautiful tourist unit has been set up grouping all the tourist services (offices of travel agencies and banks, a post office, shops selling all kinds of products, an office of the Passports Administration, a Tourist Administration office, an auditorium, a restaurant, a cafeteria, etc...).

The archaeological riches of Aswan and Upper Egypt as well as the High Dam are a source of attraction for tourists. As we have stated elsewhere, a vast campaign for saving the great Pharaonic remains has been launched, notably for saving two temples of Abu-Simbel and transferring a dozen other temples of great value.

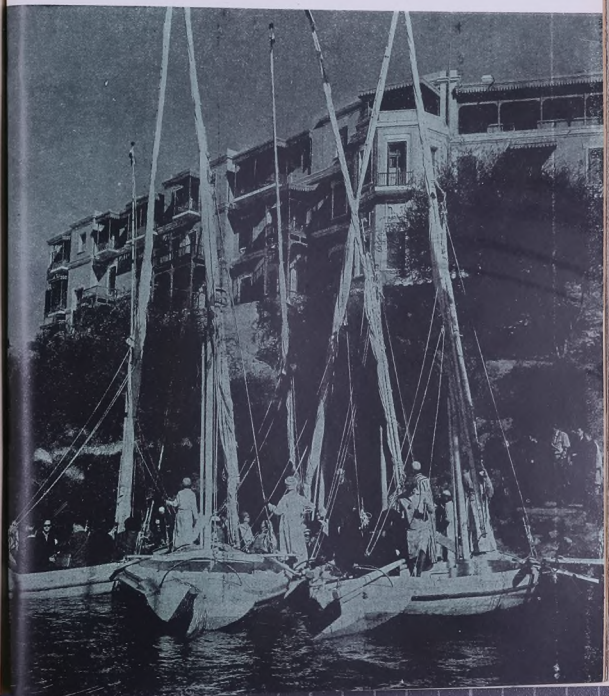
Meanwhile, intensive excavations are being made in the regions which will be submerged by the High Dam waters to form the great Nasser lake (500 square kilometres), the biggest artificial lake in the world, to uncover the greatest possible amount of remains.

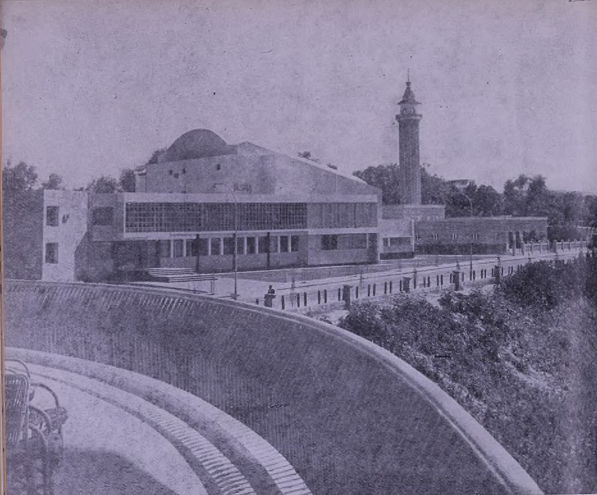
Dr. Hatem has also formed a committee to study the repairs necessary for the preserved monuments.

Archaeology and tourism are directly related, points out Mr. Ibrahim Khalifa, who has drawn up a very interesting project which he has submitted to the Minister of Culture and National Guidance. It consists briefly of a plan to set up on each side of the road between Aswan and the High Dam (20 kilometres) archaeological remains forming forty « stops » and bearing the names of Nubian villages. At the end of the road, where it meets Lake Nasser the visitor will find a model of the High Dam and one of Abu-Simbel. A cafeteria and a restaurant will be set up nearby.

A very interesting project, which will make the visit to the High Dam a most edifying pleasure for the mind and the eye.

In less than four years, Aswan has become a centre of attraction for millions of tourists from all parts of the world.





(top) The Palace of Culture in Aswan plays a leading role in spreading cultural activity in the area. (below) The Nile has always been a source of inspiration for many a writer.

(top) Many modern hotels are now being built in Aswan to accommodate the thousands of tourists visiting the High Dam site and historical places. Here is the New Cataract Hotel, and (below) the Amon Hotel.

TRIUMPH AND SACRIFICE

The waters rising behind the High Dam, now universally known by its Arabic name Sadd El-Aali, will forever obliterate what the world's archaeologists commonly refer to as the «greatest out-door museum in existence»— three hundred miles long, a museum containing not dozens but hundreds of ancient monuments and archaeological sites, some, like Abu Simbel, of surpassing beauty, presenting the fullest record hitherto known of the civilization of man.

As mentioned elsewhere in this issue under the title «The High Dam and Folklore» in olden times, at the height of the flood season each year, a brave—and considered fortunate—maiden from among the nobility of the ancient land was given as a bride to the mighty Nile. Dressed in the most elaborately rich wedding robes and weighted by expensive jewellery, and amidst the joyful ritual of the most sacred ceremony of the year, the dolled-

THE FRUIT OF COLLABORATION

(by Abdel Moneim El-Sawi, Undersecretary of State for Tourism and Antiquities)

Ancient civilizations have left their impression in Nubia : stupendous structures which rank among the most admirable in the world, and which it behoves this generation to safeguard.

Consequently, it was not surprising that the Government of the United Arab Republic appealed to an international organisation, UNESCO, requesting it to save these riches, which indeed do not belong solely to the country in which they are located. The whole world has the right to their perpetuity.

This action, conducted on an international level, constitutes a happy example of international solidarity. It has permitted, now and henceforth, the transfer of seven out of the seventeen Nubian temples, namely, those of Debod, Kertassi, Taffeh, Dakka, Maharraka, Dendour and Kalabsha. Work is currently in progress to save the temples of Beit el Wali, Wadi and Seboua, as well as the tomb of Ennaya, thanks to the generous contribution of the United States Government. The other temples are awaiting only the necessary funds for their salvage.

This international action has afforded, above all, the saving of the two great ensembles of Philae and Abu Simbel, which rank amongst the loveliest pieces of work of human inheritance. Their destruction would have been an irreparable loss.

It is comforting to record here the keen interest displayed by so many countries in responding to the appeal of UNESCO.

To all those who contributed to the saving of the monuments of Nubia — governments, organisations, public or private institutions, and individuals — the United Arab Republic reiterates her sincere thanks and deepest gratitude.

up maiden disappeared in the folds of the roaring, chocolate-coloured waters as the Nile took her for a spouse. This was the sacrifice given freely by humanity for the great life-giver of the ancient land. But now, when yielding finally to the taming will of man, the eternal river demands a colossal, ultimate sacrifice. «Never, since Noah's great flood», wrote an archaeologist, «have so much riches been drowned under water». For, indeed, the huge artificial lake that will be created by the Sadd El-Aali claims to hug under its deep waters forever the most valuable legacy of cultures, harking back to the dawn of history.

From the point where it is joined by its last tributary, the River Atbara in the Sudan, the majestic Nile fights its way through some sixteen hundred miles of desert to reach the Mediterranean. Through this narrow valley passed men who may have been the first of our true ancestors. On the banks of the Nile they left their crude stone tools and the remnants of their early existence. Succeeding tribes and families travelled the same way, leaving evidence of their way of life for the modern archaeologists' spades. Thousands of years later there followed the rise of the Egyptian Kingdom, with the glorious progress of the great dynasties and the construction of those pyramids, temples, tombs and monuments which remain among the wonders of the ancient world. The long line of Egypt's Pharaohs, since the White and Red Crowns of Upper and Lower Egypt were united by the legendary Menes, endured for thirty centuries and ended only with the death of Cleopatra. Each one in this amazing procession of sovereign rulers left his indelible mark in the ancient land of Nubia. For centuries afterwards, the Ptolemaic Greeks, and especially the Romans, helped shape Nubia's destinies, only to give way as a Christian culture gradually came in. The Middle Ages saw the beginning of the everlasting Arab, Islamic culture. Hence, the destiny of the austerely beautiful Nubia was linked at all times with that of Egypt, even to this day when Nubia is to be inundated so that Egypt may live.

Even in the very early days, Nubia linked the Mediterranean with the heart of Africa south of the Sahara. As with many such corridors, Nubia was inevitably a notorious battle-ground. There is the famous report of a campaign under the Egyptian King Snefru, 4,600 years ago : «The land of Nubia hacked to pieces; 7,000 men and women and 200,000 cattle and sheep led away». For fifty turbulent centuries the historical land has seen the soldiers of the Pharaohs, the dark-skinned warriors from kingdoms of the south, Greek and Carian mercenaries, helmeted Roman legionnaries, the troops of Islam, the khaki-clad soldiers of Kitchener's army, the mounted Dervishes of El-Mahdi, all marching and counter-marching under the scorching Nubian sun.

In quieter times, the Egyptians exploited Nubia's rich mines and quarries. In the Turin Museum there is what is believed to be the oldest map in existence. The ancient papyrus marks the location of gold mines—believed to be those exploited up to our time in the Wadi El-Allaqi. Traders passed on their way south with honey, wheat and cloth, and returned with ebony, panther skins, ivory—and once, according to an old record, with a pygmy «to dance for the King and to rejoice and gladden the heart of the Lord of Upper and Lower Egypt, Neferkare, who liveth forever».

But now peace is to come forever to this land. For Nubia, with its rocks, its temples, its fortresses, its memories of a past incredibly remote from our time, is to vanish forever beneath the waters of the Nile, the river which once gave it life. For millenniums, time in Nubia—like the Nile—seemed to have neither beginning nor end. Only now, as the shadow of the High Dam falls on this sunbaked land, have months, days and hours begun to matter.

It is indeed ironic that Nubia, with its inestimable historical and aesthetic treasures should have remained comparatively neglected for so many years until, at the inception of the Sadd El- Aali project, and with but a few years to run, it emerged from obscurity into the centre of world attention. The time left for salvaging operations is short, and the task is tremendous. The cost of removing or protecting the existing monuments and of excavating the undug sites on the scale demanded by the occasion, is far beyond the resources of any one nation. Realising this fact, and recognising the universal significance of the salvaging operations to humanity at large, the Government of the United Arab Republic, in co-operation with the United Nations Educational, Scientific and Cultural Organisation (UNESCO) summoned the united efforts of world civilization to save this common heritage of man.

How is the world responding ? As far as the excavation of sites is concerned, the results have been more than promising. Expeditions from some thirty countries have been working in the field for the past three seasons. Nothing can be more exciting than to move along the river today and see ten thousand years and more of history being simultaneously exposed. Teams of archaeologists, epigraphists, artists, engineers, geologists and photographers swarm across the area, imbued with a mysterious urgency in their desperate race against time, and intent upon saving the mighty mementos of man's past.

The Documentation Centre on Ancient Egypt in Cairo is busy undertaking the recording of every sculptured relief, every inscription and every architectural detail of every ancient building. Much of this exacting work is being done by photogrammetry, a stereoscopic process which makes possible the reconstruction of an object in the form of an exact model. Aptly, the Centre has adopted as its emblem «Ma'at», goddess of truth and universal equilibrium. Obviously, however, no facsimile can ever replace the original, and preservation is essential wherever possible. In fact, as far as Egyptian Nubia is concerned, the whole stretch of territory from Aswan to the Sudan border has been thoroughly surveyed archaeologically and many of the important sites excavated. Fortunately, too, schemes have been completed, and some are actually underway for the relocation of outstanding shrines and temples on the shores of the new storage lake or on higher ground overlooking it. Of these, the most stupendous undertaking is the salvation of the two peerless temples of Rameses the Great and his beloved goddess-wife Nefertari at Abu Simbel.

Under the generous terms offered by the Government of the United Arab Republic to encourage world collaboration in the salvation of humanity's precious heritage in Nubia, no less than five temples—Dandûr, Dâbûd Tifa, El-Dirr and Elesiya—have been designated as gifts to countries making donations to the salvage work. Three temples already lie dismembered on Elephantine Island, opposite Aswan, glamorous buildings no longer but reduced to orderly rows of stone blocks and crated reliefs, all neatly numbered and catalogued, awaiting shipment to countries as yet unnamed.

Every traveller to the land of Nubia is acquainted with the famous landmarks on the Island of Philae in the Nile : the Kiosk of the Emperor Trajan and the Temple of Isis. But few have come really close to this splendid preserve of Ptolemaic and Roman Temples, barely 500 yards long and 160 yards wide. Still fewer have set foot on it. For, the island of Philae is submerged most of the year under the waters held behind the old Aswan Dam. Only at the peak of the Nubian summer does Philae emerge from the flood, and only when its covering of mud has dried and cracked does it invite the visitor to walk with awesome wonder through the impressive colonnades that lead from the landing place to the great Temple of Isis. Perhaps in the whole of Nubia there is no more harmonious combination of architecture and scenery. But when summer's end brings rising waters, once again Philae sinks beneath the Nile.

According to the salvage plans, all this may change. When the High Dam is completed, three dikes will be constructed to protect the famous monuments, and in less than a decade visitors may stroll once more—as Queen Cleopatra once did—under Philae's acacias and palms.

The already assured destiny of Kalabsha is a different one. The largest of the Nubian temples after Abu Simbel was completely dismantled into some 13,000 blocks, averaging a ton apiece, and has since been moved down the river on special barges and reassembled on a new site near the Sadd El-Aali.

Still, the moving of Kalabsha is a modest undertaking by comparison with the project to save the huge temples at Abu Simbel.

One hundred and sixty miles up-river from Aswan, and just short of the frontier between the Sudan and the UAR, a huge cliff of pinkish-yellow sandstone rises above the west bank of the Nile. There, the two mammoth temples of Abu Simbel were carved into the mountain by the best stonemasons of the great Pharaoh Rameses II, some 3,200 years ago. The living rock was fashioned to make these two sanctuaries part of the actual landscape. The larger of the two magnificent shrines, which is probably the noblest and most imaginative work of its kind to come down to us from ancient Egypt, was dedicated jointly to the sun god Re-Harakhte and to Rameses himself who, like all the Pharaohs, was deemed a god in the eyes of his contemporaries. A similar but smaller temple nearby was dedicated to the goddess of love, music and dance—Hathor—and to Rameses's beloved Queen Nefertari.

It is said that the exacting work took some fifteen years. To carve the larger temple, workmen smoothed the surface of the entire cliff to a height of 108 feet, and there, at the entrance, carved four colossal 67-foot-high figures, all seated, all alike, all of Rameses himself. Tunnelling 200 feet inside the cliff, the builders then hollowed out great halls

guarded by rows of lesser colossi of the god-king—a mere 30 feet tall, and chamber after chamber whose walls they adorned with carvings of great beauty.

At any time Abu Simbel is an awesome sight, but at the moment of dawn it is simply incredible. Some experts believe that the temple was cunningly constructed with precision for just this moment; for, when the rising sun tops the mountains across the Nile and flashes full on the façade, the figure of the Sun God seems animated by the sudden light, as though to step forward to greet the morning. Below, the entrance and halls are so skilfully aligned that on certain days of the year the first rays of the sun flash straight through them to the sanctuary at the temple's heart, illuminating the carved and colourful walls.

The smaller of the two Abu Simbel temples, that of Queen Nefertari, is equally overwhelming, but in a quite different way. Here the emphasis is not on grandeur, but on beauty. In the innermost chamber are three of the loveliest creations of antiquity, depicting the detached yet alluring figure of Queen Nefertari standing between the goddesses Hathor and Isis, perfectly peaceful under the wings of their protection. Surrounding them are many other reliefs of the King and of gods and goddesses, creating a breath-taking atmosphere of peerless beauty.

No one who has had the good fortune to look upon the two perfect shrines in their natural setting can doubt that the world would certainly be poorer for their destruction. Yet for some time, their destruction seemed inevitable, as a score or so of plans submitted for their salvage by specialised international engineering firms were turned down either as unsatisfactory or prohibitively expensive. Fortunately, however, upon the recommendation of the UAR Government, UNESCO accepted the plan proposed by Swedish consulting engineers, which calls for dismantling the Abu Simbel temples and reconstructing them on the desert plateau overlooking the present site. An agreement for this effect was signed last February in Cairo between Dr. Abdel Kader Hatem, Vice-Premier for Culture and National Guidance, on behalf of the United Arab Republic, and the Deputy-Director of UNESCO, on behalf of the world organisation and contributing nations.

The greater part of the estimated cost of this unprecedented undertaking — 30 million dollars— has already been secured, and it is hoped that the balance, some six million dollars, will be met by contributions from foreign governments, institutions and individuals throughout the world. Work, however, is already underway on the biggest salvage operation of its kind in living history. With the reservoir's rising waters due to lap the feet of the majestic statues of the Great Rameses next autumn, bids have been requested for the construction of a coffer dam to protect the temples while they are being sliced—piece by piece—out of the living rock.

Thus, Nubia—described by archaeologists as the «cockpit of the ancient world»—while offering a unique opportunity to world scholars and field archaeologists alike, does so under sentence of imminent extinction by drowning.

1 **A general view of the Great Temple of Abu Simbel which was carved into the mountain by Egyptian stone-masons, some 3,200 years ago.**

2 **The facade of the smaller Temple of Abu Simbel, which was dedicated to Hathor, the goddess of love, music and dance, and to Queen Nefertari, the beloved wife of King Rameses.**

3 **The last two statues, ten metres high, of Rameses II, found in the interior of the Great Temple of Abu Simbel.**

4 **The Temple of Kalabsha, the largest of the Nubian temples after Abu Simbel. It has now been completely dismantled and re-assembled on elevated ground, far from flood-waters.**

1

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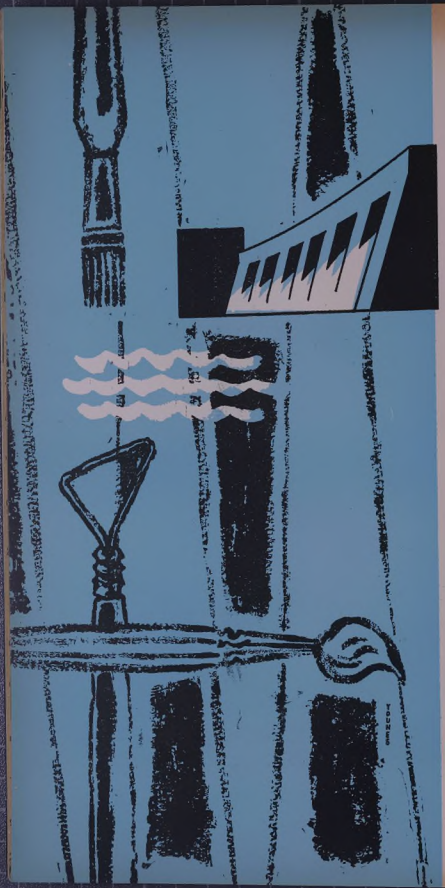
Writing Delights in Omar Khayyam's

House

Oriental Delights at Omar Khayyam's

House

Rameses II on his chariot. A base-relief of the Temple of Abu Simbel



ART

THE HIGH DAM AND PLASTIC ARTS

Events of current interest inspire our artists. We must admit that this art is pictorial, since current events in the U.A.R. centre at the moment on a landscape of raw beauty — Nubia — and the most considerable work of art in the world — the High Dam.

In Nubia, much of which will soon disappear under the waters of the vast artificial lake created in front of the High Dam, our artists have captured the essential images: the villages whose houses, shaped like white cubes, are decorated with graceful graffiti ; the popular scenes and the various types of inhabitants, all of whom have such expressive faces. Covering this area, whose inhabitants will be transferred elsewhere — to Kom Ombo or the New Valley — our artists have prepared a wonderful album in which, by means of their sensitiveness and a transposition which is their own, we find a vibrant existence.

With regard to the High Dam where work is being conducted according to the drawn up projects, our artists add in the margin of the plans of technicians the impressions which this gigantic undertaking inspires in them. Thanks to them we are able to admire the work of the labourers together with that of the mechanical monsters, cranes, bulldozers, lorries, depicted on canvas. The human side of the colossal enterprise thus appears blended with the immense concrete installations. The Arab labourer figures in them with dignity, like a noble element of work. We feel he is working freely for the betterment of his own life and the prosperity of his land.

To perpetuate in the work of art the contribution of the worker to the High Dam and the memory of Nubia and its patriarchal customs, the Ministry of Culture sent about thirty artists to the region. Their sketches, paintings and sculptures have been displayed in private exhibitions, but mostly at Wekalet Al-Ghouriya, at the Salon for Young Artists, and also at the Fifth Biennale of Alexandria. This denotes the importance of these two « subjects » with regard to the

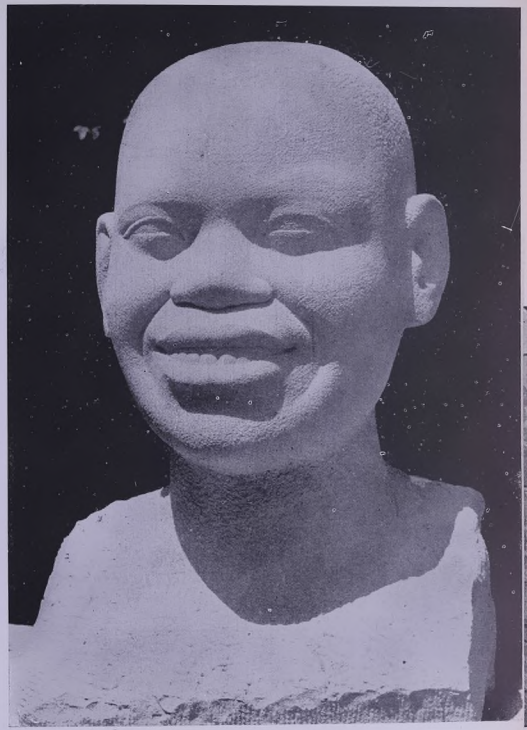
inspiration of contemporary fine arts in the U.A.R.

Most of these artists are well known. Others, like Ahmad Abdel Wahab, are new discoveries. It is with extreme sensitivity that the latter has rapidly depicted working, with such an elaborate subject, the typically Nubian architecture of the houses and the adolescent faces with the vivacious eyes, as in the famous Fayoum portraits at the Cairo Museum. Also, sculptor Ahmad Abdel Wahab has boldly synthesized a « Nubia » out of sandstone, a work which definitely denotes a blossoming talent.

Another sculpture, not less remarkable, is the « Nubian woman », cut in straight lines, by Anwar Abdel Mawla, with the well-controlled chisel. From Ramses Younan comes a painting where the chaotic scenery of the Nubian desert is rendered with strength in captivating gold and brown hues. The drawings with the flow-master of Gazbia Sirry are more attractive than her painting, which is too crowded, with a marvellous Nubian woman rising out of the Nile under a starry sky. Tahiya Halim saw Nubia in her customary manner, and the paint plays an essential role. Nada also conveyed Nubia in his own vision of quasi-Pharaonic frescoes with deep blues. Hussein Bicar, whose unfailing craftsmanship is asserted in ink and water colour drawings, does not, however, go beyond the decorative panel in his paintings. Salah Taher, known for his varied palette, presents a Nubia sometimes realistic, sometimes stylized. The works of Samuel Henein are among the most appealing : what a display of the art of the essential in his « Crocodile ». And in his « Cataracts » what a fineness of conception and of touches. Aly El Dib has a delicate and exact vision of the Nile landscape at the High Dam site. Ismail Taha treats Nubia in a personal manner, somewhere between the Pharaonic frescoe and the modern panel.

Abul Enein gives us Nubian dancers, high in colour, which remind us of folkloric ballet. Farghaly Abdel Hafiz transforms the subject into a new creation. His colours are well-balanced with ochre and orange highlights, and his scrapings form an expressive and attractive graphism in the thick layers of paint.

Among the sculptures there is vigour in the massive labourer of the High Dam by Abdel Hamid El Dawakhly. Segini, one of the masters of the race, has also depicted with great nobility the worker at the great work site on the bank of the Nile. Nor must we forget to mention the work of Salah Abdel Kerim, plastic sculptor of scrap-iron. Salah Abdel Kerim composes — we would like to say models — his subjects out of cog-wheels, bolts, screw nuts, chains, pulleys and nails, which he welds together autogenously, thus proving the capacity of this material for being shaped. With the plasticity of iron filings and scoria Salah Abdel Kerim erected the monumental figure of the High Dam labourer. This giant sculpture, made out of all the tools of work, magnifies the labourer in his own element. It is the boldest sculpture raised to the glory of the Arab labourers engaged in the greatest and most admirable work of modern times, which is, diverting the Nile from its course and compelling it to distribute its immense energy on the renewed land of Egypt.



«A Nubian,» sculptured by Abdel Mawla.

A sculpture by Abdel Mawla, treating the Nubian personality.

«A Sudanese,» by Omar el-

«A Nubian girl,» by Gazibiya Sirry.

A painting by Salah Taher, depicting Nubian architecture.

THE HIGH DAM AND FOLKLORE

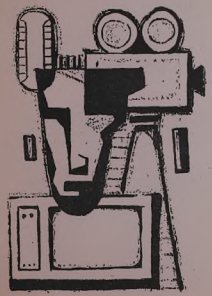
Standing on a pedestal of red granite inscribed with golden hieroglyphics, surrounded by rare flowers, holding herself straight, immobile, is the bride offered to the Nile by the Pharaoh, by the priests and by the people of Egypt, a human offering which was renewed each year. Cruel no doubt, but superbly symbolic.

The face of the virgin is expressionless, resigned; her big black eyes, as though drawn by invisible infinity, stare into the emptiness. The priests of the Phtah had jealously prepared her for the supreme sacrifice. She will give up life, to the applause of the Pharaoh and the people assembled on the banks of the Nile, only for a divine, ineffable, eternal marriage.

Suddenly the Nile crosses the old Menes Dam. The waves rush forward madly, tumultuously, terribly. They seize the virgin by the hips and overthrow her. In a movement of graceful terror she lifts up her arms towards the sky. Her clothes are somewhat shed and the people see her at a moment as a statue of golden bronze, whose dazzling throat glistens under the beautiful sun of Egypt, last caress of Osiris.

A moment later, nothing. The Nile has carried his bride away. He has hidden her in his time-honoured bed, covering her with his fertilizing silt... his kiss to her, a kiss which he gives each year to this land of Egypt which owes him everything.

Thus was this solemn sacrifice accomplished from the earliest times. But the day dawned when this inhuman custom was changed. The sacrificial virgin was replaced by a figure made of soft earth, which the tide carried away, marrying the clay of the statue to the silt of the river. The symbol of the sacrifice remained.



The spirit of the Nile, Hapi of the Pharaohs, belongs to the oldest sources of Egyptian mythology. At a period which far precedes history, Hapi was said to inhabit a subterranean cave at the foot of the mountain of Helwan. It was then the extreme limit of the kingdom of the delta. From there began Upper Egypt, still plunged in barbarity.

When the Gods of Heliopolis decided to inundate the land they sent a messenger to awaken Hapi and get him out of his cave. Immediately the Nile swells all along its course, overflowing its banks, taking possession of the countryside and fertilizing it.

When with the unification of Egypt, around 3,200 years before our era, the fron-

tier of the Double-Kingdom was carried beyond Elephantine island to the first cataract, it was there they established the «Nile source», not far from the place where the High Dam of our present day is being constructed.

Hapi was, for the chroniclers of the Middle-Empire, the «father of the poor» or the «father of the small child». Consequently he became the «father of the gods» because, by supplying them with their food, he took care of them like a father for his children.

The Ancient Egyptians pictured Hapi as a peasant of the marshes, dressed only in a belt with a triple thong in front. Normally he carried all the fruits, vegetables and cereals grown with the help of the waters of the river, the fish which swim in it and the fowls which abound in the reed-beds of its banks, packed together on a tray.

A source of plenty and a giver of life for the Egyptians, the Nile has also always been for them, in the field of arts, an inspirer of beauty. For some time George Benedite taught in his course at the Ecole de Louvre that the most graceful art objects of the New Empire, those in which one finds an exquisite feeling for nature, were inspired by the Nile scenery.

We can even say in a more general way that each time the old Egyptian art evoked something which touched upon the Nile, it immediately gained an exuberance of form and colour.

If the Nile has always occupied such an important place throughout time, if its legend goes back so far into Egyptian mythology, if it has forever inspired the arts and folklore, it is, as Herodotus said, that Egypt is the Nile and without it there would have been no Egypt. The extent of its crops is subject to its waters. Where the water ends the desert begins.

The statues of the Greco-Roman period which show him as a bearded old man carrying a horn of plenty, reclining indolently, leaning on a sphinx or on a crocodile, figured a host of seventeen children playing on his body or around him, representing the seventeen stages of the perfect inundation which supplied the Egyptians with their food.

The joys and the deceptions which the inundations reserved for thousands of years for Egypt of the Pharaohs, the old Nile still retains for contemporary Egypt. « Oh gigantic flood, load us with your favours, bring us your rich silt », says a popular song which the boatmen of Upper Egypt still hum.

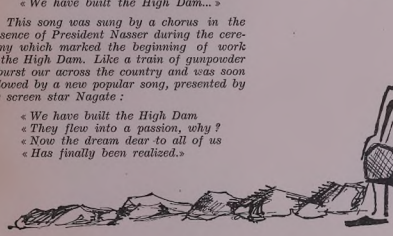
It needed all the courage of the present leaders to finally tame the indomitable nature and control the whims of this flood, which fertilizes or leaves arid whole countries, according to whether the Nile grants or refuses what is expected of him. Henceforth this «father of the gods» will be more generous towards the children of the Nile Valley, when the High Dam, this sacred god squatting on his side, will finally come into being.

It was natural that contemporary folklore should be inspired by this remarkable work, unique in the history of Egypt. President Nasser had barely announced the plan for construction of the the High Dam than a song was born. It was the work of Kamal El Tawil and was launched by the young and talented Abdel Halim Hafez. It is called «History of a people», and starts with these words:

« We have said that we will build
« And now we have built
« The High Dam
« Oh imperialism
« We have built with our own hands
« The High Dam
« With our own money
« With the help of our own labourers
« We have built the High Dam... »

This song was sung by a chorus in the presence of President Nasser during the ceremony which marked the beginning of work on the High Dam. Like a train of gunpowder it burst our across the country and was soon followed by a new popular song, presented by the screen star Nagate :

« We have built the High Dam
« They flew into a passion, why ?
« Now the dream dear to all of us
« Has finally been realized.»



A third song emphasises the determination of the entire people to undertake this gigantic project :

« We shall build the dam
« We shall build the dam
« On a glorious morning
« We shall build the dam
« Hand in hand.
« We shall build the dam.»

The High Dam served as the theme for a tableau vivant of the National Folkloric Troupe. The heroine «Khadra» sings :

« I have built the High Dam
« With all my soul and with all my strength
« I have built the High Dam
« with all my soul and with all my strength.»

A popular singer called Abul Hasan Abdel Ghaffar launched two new songs, which were also inspired by this remarkable work. In the first he says :

« We have realized all the hopes
« We have cultivated and irrigated
« We have built a High Dam
« With our own hands
« May God keep us and strengthen us.»

In the second he says :

« Dam of dignity, dam of pride
« We shall build it
« May Allah load us with his favours
« This dam is the biggest edifice
« That history and the Nile have known
« It is our greatest hope
« After having been patient for so long.»

On its part the Arts and Literature Council organized a contest for folkloric songs, with the High Dam for a theme. Ten of them were chosen and recorded. This shows the remarkable influence exercised by the High Dam over contemporary folkloric art in all its forms.

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