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Report No. P-1184a-YAR

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REPORT AND RECOMMENDATION
OF THE
PRESIDENT
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED CREDIT
TO THE
YEMEN ARAB REPUBLIC
FOR THE
TIHAMA AGRICULTURAL PROJECT

April 16, 1973

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Currency Equivalents

	<u>Free Market Rates</u> ^{1/}	
	<u>1972 Averages</u>	<u>March 1973</u>
1 Yemeni rial	\$0.20	\$0.22
1 US Dollar	5.0 rials	4.50 rials

^{1/} No par value has been communicated to the IMF. However, the Yemen Arab Republic agreed in 1972 to a provisional rate of US\$1 = YR5. Most free market transactions took place at that rate during 1972. Following the devaluation of the dollar in February 1973, the rial appreciated to a rate of \$1.00 = YR4.50

INTERNATIONAL DEVELOPMENT ASSOCIATION

REPORT AND RECOMMENDATION OF THE PRESIDENT
TO THE EXECUTIVE DIRECTORS ON A
PROPOSED CREDIT TO THE YEMEN ARAB REPUBLIC
FOR AN AGRICULTURAL PROJECT

1. I submit the following report and recommendation on a proposed development credit to the Yemen Arab Republic for the equivalent of US\$10.9 million on standard IDA terms to help finance a project for agricultural development of the Tihama region.

PART I - THE ECONOMY

2. A memorandum entitled "Current Economic Position of the Yemen Arab Republic" (EMA-50a) dated April 20, 1972, which updates the economic report issued on October 16, 1970 (EMA-25a), was distributed to the Executive Directors on May 15, 1972. More recent information on the economy was obtained by an economic mission to Yemen in the autumn of 1972 which will shortly complete its report. This mission concentrated mainly on the agricultural sector, and its principal findings are reported below. Country data are provided in Annex I.

3. The present Yemen Arab Republic was established in 1962, replacing the ruling Imam and his oligarchy, under whom Yemen had remained almost completely isolated from the rest of the world. Lack of internal transport and communications facilities has contributed to the continuing isolation of many parts of the country. Since 1962, Yemen has witnessed a long civil war (1962-1970), frontier clashes with the People's Democratic Republic of Yemen, drought, subsequent famine in certain areas (1969 and 1970), and disease including a cholera outbreak in 1971.

4. Political integration has been hindered by tribal differences. The end of the civil war left the tribal sheikhs in a stronger and more independent position than before. This fragmentation of power, combined with the absence of institutions and of trained cadres at the central government level, has greatly hindered the government's ability to formulate national economic objectives, tax adequately and otherwise control the economy, and carry out a program of economic development.

5. Despite these problems, however, coalition governments have made considerable progress since early 1970 in introducing basic elements of modern government. During the past eighteen months, Yemen has elected its first national legislature, established a central bank, organized a national planning and statistical agency and a public works authority, and improved its revenue performance. Four commercial banks began operation in 1971-72 (bringing the total number to five), and the government has been successful

in soliciting sizeable external assistance from Eastern, Western, and Arab sources. In November 1972, an agreement was signed at Tripoli between the governments of the two Yemens aiming at a merger between them. While it remains to be seen whether or not the merger can be implemented, at least the agreement has stopped the fighting between the two countries and improved the prospect that greater attention can now be given to the task of economic development.

6. Yemen is among the least developed countries in the world. Over 90% of its estimated 5-6 million people are engaged in agriculture and only a few hundred thousands live in cities and large towns. Considerable progress has been made in building roads and other transport facilities over the last decade, and development of the primary highways should be completed by 1974, with completion of the Sana'a-Saada road to northern Yemen and the paving of the Sana'a-Taiz highway (see Map). However, Yemen remains extremely underdeveloped in virtually every other form of economic and social infrastructure, and in its most forms of institutional and administrative capacity. The literacy rate is estimated at only 10 percent of total population. Domestic savings are extremely small, but due to the actual and potential availability of foreign aid, imported capital goods are not the most crucial bottleneck. The most basic constraints to development and to the country's ability to absorb aid are the lack of skills (technical, entrepreneurial and managerial), the lack of institutions, and the country's low resource base and the insufficient information concerning it. Yemen will need to expand its absorptive capacity through resource surveys and preinvestment studies, enlarged training programs, and incentive schemes to attract skilled Yemenis now working abroad to return. It will have to continue, in the meantime, to rely to a large extent on the services of expatriates.

7. Land and water are both scarce in Yemen, yet agriculture accounts for perhaps three-fourths of GDP. Farmers are industrious, and land and water resources are carefully husbanded, with terracing and primitive irrigation work. However, the agricultural sector remains basically subsistence-oriented and is constrained by a feudal system of land tenure. Cereals for local consumption are the principal crops, while very modest amounts of cash crops are exported; rock salt comprises the only significant non-agricultural export. These exports have long been stagnant, and there seems little prospect for much growth in the near future. Food imports, on the other hand, have mounted rapidly in recent years. Improved rainfall in the past two years has narrowed the food gap in the countryside, but the trade deficit in food products has continued to mount. Given these conditions, the agricultural sector warrants highest priority in Yemen's development program.

8. Yemen's known other resources are very limited. Fishing may have some potential for growth, but is currently of little economic importance. Unlike most countries of the Arabian peninsula, Yemen has no known oil resources. No basic resource survey has been made, and except for rock salt, no minerals are known to exist in commercial quantities.

9. Until about five years ago, industry was virtually non-existent. Since then, a number of factories have been built in the main cities, mostly with foreign aid. These include tobacco, textile, aluminum, soft drinks, cement and other building materials factories. Nevertheless, industry employs probably still less than one percent of the labor force. There appear to be good prospects for industrial expansion in agricultural processing and in light manufacturing for construction and domestic consumption.

10. Tourism is another sector with a very small base, but with some potential for growth. Before the 1962 Revolution, tourists were discouraged from entering the country. Later the civil war and lack of amenities were serious deterrents. Tourism is now being encouraged and two new hotels have recently been completed. Yemen has much to offer the tourist, including a favorable climate in the mountains, fine scenery, unique architecture, and antiquities. With its new roads, airport facilities, and hotels, Yemen may expect tourism, especially from neighboring countries, to play an increasing role in the economy in coming years.

11. The overall economic situation has improved substantially since about mid-1970, due to the end of the civil war, a substantial inflow of capital and some entrepreneurs from neighboring countries, improved rainfall, and large injections of foreign aid in support of both current and capital expenditures. Production in the countryside has risen substantially in the past two years, mainly due to better weather, and there has been rapid growth in construction and consumption in Yemen's cities. Urban growth has been supported by large private remittances from Yemenis working abroad (nearly \$50 million in 1971), by inflows of private capital and higher public expenditures. The large inflows of both public and private capital have been maintained in 1972 and have contributed to the accumulation of cash balances by the government and to a stabilization of the free exchange rate of the Yemeni rial. However, the rising foreign assets and expanding credit to the private sector contributed to continuing inflationary pressures.

12. Yemen's recent fiscal performance has been mixed. Current revenues have more than doubled in the past two years, despite fundamental social and political constraints on tax capacity. Nevertheless, the current budgetary deficit continued to widen as current expenditures increased even more. Budgetary support (largely from Saudi Arabia) was equivalent to almost half of total current expenditures in FY72, while development expenditures continued to be financed almost entirely from foreign aid. Disbursements from foreign project and commodity aid in FY1970 and FY1971 averaged about \$16 million annually. The Government will have to rely on foreign aid for the financing of most of development expenditure for some time. Yemen's budgetary and balance of payment's position is extremely vulnerable, and greater control needs to be exercised on the growth of current expenditures. The growing prosperity of the urban sector will remain precariously dependent on remittances and capital inflows from abroad until development efforts begin to improve productivity and create an economic surplus particularly in the rural sector.

13. Thus far, Yemen's lack of clearly defined national economic objectives and priorities has underlain a piecemeal and uncoordinated development effort, although a large part of investments has been in the transport sector and responded to obvious priorities. To help remedy this situation, the Bank, together with the Kuwait Fund, has sponsored an advisory team in the Central Planning Organization (CPO). The team, currently composed of five members, helped create the CPO, which is responsible for devising and carrying out Yemen's economic development plans. The CPO is, at present, perhaps the most active and best organized and staffed organization in Government. It is drafting a national development strategy and mid-term investment program, helping channel and coordinate external aid, advising on general economic policy and identifying and preparing investment projects. In the spring of 1973, the CPO will present its recommended medium-term development strategy and investment program to the Council of Ministers, after which an official program is expected to be adopted.

14. Yemen's reliance on foreign aid over the past decade has resulted in the growth of a large foreign debt. Total disbursed public external debt as of mid-1972 was estimated at about \$147 million with about another \$100 million undisbursed. The major creditors are the USSR, China, Saudi Arabia, and the Federal Republic of Germany. Yemen has not been able to service most of its debts, and lenders have not been pressing for repayments. Some debts have been rescheduled, and the Yemeni authorities are currently engaged in bilateral negotiations to postpone other repayment obligations. Most of the donors have recently been making their assistance available on grant or very soft terms, recognizing that Yemen's capacity to service debt will remain limited for many years. Efforts are being made by the Yemeni authorities to better monitor disbursement of foreign debt and existing and future servicing obligations.

15. The aid program of the Federal Republic of Germany is currently the largest. The aid role of the Soviet Union has been cut back in recent years; China is continuing with a large road building project. Substantial aid has been provided by Kuwait, Saudi Arabia, Iraq and Libya, and in recent months the United Arab Emirates have also made aid commitments to Yemen. British and American aid will soon become more significant. As aid programs grow the need for better aid coordination and direction also increases.

PART II - BANK GROUP OPERATIONS IN YEMEN

16. Annex II contains a summary statement of IDA credits and Bank grants as of March 30, 1973, and notes on the execution of on-going projects.

17. In 1971, the Bank made a grant of \$200,000 to help finance a team of planning and economic advisors. The team has been very successful (see para 13 above), and the Government has requested an extension of its services.

18. In June 1972, the Executive Directors approved an IDA credit of \$7.7 million equivalent for a Highways Project. The project provides equipment for road maintenance and feeder road construction, and also finances feasibility studies and detailed design of important highway links. It includes creating a national Highway Authority with capacity to effectively plan, design, maintain and administer the highway network. This was the Government's first experience with a Bank Group lending operation, and they have carried out their responsibilities quickly and efficiently. Necessary legislation has been passed, the Highway Authority created and staffed, and three groups of consultants selected for various project activities.

19. Future Bank Group activity for Yemen will focus on three objectives: (a) enlarging Yemen's absorptive capacity through assistance to education, the creation of essential institutions, and initiation of resource surveys and other basic information studies; (b) continuing to help devise an appropriate development strategy and investment program, including special project identification and preparation work; and (c) lending in sectors of high priority such as agriculture, social services and basic infrastructure. In view of Yemen's poverty and its large external debt, only IDA financing is envisaged. The Bank Group's program will lay particular emphasis on setting up project related institutions, which will initially have to rely heavily on expatriate specialists and consultants. However, emphasis will be placed on recruiting local counterparts, and the Bank Group will continue its close relationship with newly created institutions through frequent contacts and possibly through repeater operations, to help consolidate their operations, and train staff.

20. Apart from the proposed credit, the Association has appraised an education project which envisages establishment of teacher's training facilities, vocational and agricultural training centers, and other schools, as well as improvements in existing schools and provision of technical assistance. This project is presently scheduled for Board presentation towards the end of FY73. An industrial estates project which aims at providing infrastructure, technical assistance, extension services, and credit for import of equipment, has been prepared with the help of UNIDO and is being appraised by the Association. WHO and various consulting firms have carried out studies and prepared, under the guidance of the Association, a water supply project for Sana'a, the capital of Yemen, which is scheduled for appraisal in mid-1973. Furthermore, preparation work has been initiated for an integrated rural development project for the Midlands and Highlands regions of Yemen. Investigations of the agricultural potential of other areas of the Tihama region would be financed under the proposed project.

PART III - THE AGRICULTURAL SECTOR

21. Unlike most of the countries of the Arabian Peninsula, parts of Yemen catch the edge of the Indian Ocean monsoon winds and rainfall is usually adequate to cultivate up to two million hectares. Perhaps another three million hectares have soil suitable for cultivation, but are usually uncropped for lack of water. Only about 200,000 ha are currently irrigated.

22. Agriculture is Yemen's predominant sector, employing 80-90% of the working population, generating about 70% of GDP, and accounting for 90% of its meager exports. The nature and structure of agriculture has been essentially unchanged for centuries. About 90% of the cropped area is devoted to cereals--sorghum, millet and some maize. Cash crops produced for export are principally coffee and cotton.

23. The country is divided by topography and rainfall into five major zones: (a) The Tihama region (coastal plain) borders the Red Sea and occupies about 10% of the country. The proposed project is located in this region. Agricultural production is concentrated in the eight major wadis (valleys of seasonal streams whose catchments are in the mountains). All of the cotton and much of the domestically marketed grain surplus are produced in the Tihama. (b) The Western slopes comprise perhaps 20% of the country between the coastal region and the mountain plains. Farming is carried out on heavily terraced slopes and small alluvial strips in the bottom of mountain gorges. Cereals, fruits and vegetables, coffee and qat, a mild narcotic leaf, are the major crops, and livestock graze on the mountain sides. (c) The Midlands Region between 1,000 m and 2,500 m high, benefits from up to 1,000 mm of rainfall, comprises about 10% of the country, and is the most productive agricultural region in Yemen, basically with the same products as the Western slopes. (d) Highlands, above 2500 m, produces wheat, barley and sorghum and dry grazing. (e) The Eastern slopes, which were reputedly a rich agricultural region in antiquity, is now largely a desert.

24. Most agriculture is conducted on a subsistence basis. Although some modern agricultural inputs have been introduced in various areas during the past two years, such as pumps, tractors and fertilizers, productivity is among the lowest in the world. Even in a normal agricultural year, about 20% of the country's food requirements must be imported. Foodstuffs constituted almost half of total imports in 1971. There is no national agricultural extension service, no organized agricultural credit of any kind except for cotton, and there are only limited research and extension activities underway through three UNDP/FAO projects.

25. Despite the difficult conditions under which they work, Yemeni farmers are energetic and adaptable. Experiments with improved seeds and fertilizer have produced significant increases in production. However, there are a number of major constraints to development of agriculture including: (a) erratic rainfall coupled with absence of a basic knowledge of water resources and irrigation facilities; (b) extreme shortage of basic institutions and skilled manpower; (c) low level of technology and infrastructure--feeder roads, etc.; and (d) the existence of complex socio-economic systems inherent in a centuries-old, basically tribal society. The majority of farmers own their farms, but their holdings are generally very small and their total ownership probably does not exceed about 10% of the total cultivated area. About 15-20% of arable land is state- or privately-owned waqf land (donated to religious trusts), generally leased to farmers. The balance is in the form of large-sized individual ownerships, also generally leased.

26. The Government is devising a development strategy for agriculture, with the assistance of the IBRD-Kuwait Fund planning team. The draft development program is expected to be ready in mid-1973. It appears at this stage that it will emphasize agricultural development as its first priority. The strategy within the sector would focus on: (a) development of the Tihama for cash crop (i.e. cotton), grain and cereal production; (b) development of the Midlands/Highlands for more immediate cereal food production increases; and (c) establishment of national agricultural research, extension and credit services and agricultural planning and administrative capacity. This general approach seems appropriate.

27. There has been little public investment in the agricultural sector, and virtually all such investment to date has been financed from external sources, primarily the USSR, German Democratic Republic, Federal Republic of Germany and the UNDP/FAO. Additional technical assistance for groundwater and soils evaluation and crops research is being offered by the United Kingdom, China and United States.

PART IV - THE PROJECT

28. The proposed project is based on investigations by Hungarian consultants under an investment feasibility study financed by the Kuwait Fund and UNDP/FAO. The preparation work started in April 1969. An FAO/IBRD Cooperative Program mission prepared a feasibility report. The project was then appraised in June/July 1972. Negotiations were held in February/March 1973. The Yemen delegation was headed by Mr. Ahmed Abdo Saeed, Minister of State for Development.

29. The project represents the first stage in the development of the Tihama (coastal) region of Yemen. It consists of: (a) improvement of the existing surface water irrigation system and introduction of deep well groundwater irrigation at Wadi Zabid, covering an area of 17,000 ha; (b) a feasibility study of Wadi Mawr for the development of surface and groundwater on about 60,000 ha; (c) an agricultural credit component to finance loans to farmers; and (d) establishment of a Tihama Development Authority responsible for development of agriculture in the whole Tihama Region and of an institution for agricultural credit. The total estimated cost of the project is \$17.5 million (net of duties and taxes) with an estimated foreign exchange component of \$10.9 million. The proposed IDA credit would cover the full foreign exchange component, about 62% of project costs. The Kuwait Fund and the Government would provide up to \$5.9 million for local costs, or 34% of total costs, of which \$0.7 million would be used by the Yemen Government to start the credit fund. The balance of \$0.7 million would be supplied by project farmers participating in the credit scheme. Effectiveness of the IDA credit is subject to the approval by the Kuwait Fund's Board of their loan, which would be on IDA terms but with a service charge of 1/2%. A Credit and Project Summary is attached as Annex III together with a map showing the location of the project areas. A report entitled "Appraisal of Tihama Development Project - Yemen Arab Republic" (73a-YAR) dated March 27, 1973 is being distributed to the Executive Directors separately.

30. Wadi Zabid is the fourth largest valley in Yemen covering about 25,000 ha, out of which about 20,000 ha are cultivable and about 17,000 ha served by the projects works. About 60,000 people live in the wadi. The soils are good and well drained. Seasonal rainfall produces uncontrolled flash floods. The project would include construction of about 10 permanent diversion weirs (replacing the temporary structures often washed away during heavy flooding), improvements to about 120 km of existing canals and structures, construction of about 50 km of new canals and additional structures on the canals. Credit facilities would also be provided for drilling up to 35 tubewells for groundwater irrigation for about 1,400 ha. Simple agricultural research and extension services, and a credit institution for lending for agricultural development and processing (i.e. cotton ginning) facilities, would also be provided.

31. Wadi Mawr is the largest valley in Yemen, with about 60,000 ha of cultivable land. Of this 35,000 ha is commanded by an existing spate irrigation system more primitive than in Zabid. About 20,000 ha are irrigated in a typical year. An additional 25,000 ha is believed to be underlain with groundwater suitable for irrigation. Wadi Mawr is remote and more sparsely populated than Zabid. The feasibility study for Wadi Mawr would assess the potential and prepare a plan for developing surface and groundwater for irrigation. The project would also finance a 60 km access road and buildings for project staff in Wadi Mawr.

Project Institutions, Studies and Consultant Services

32. The Project would be implemented by a Tihama Development Authority (TDA) which has been created by legislation adopted in 1973. Its Chairman/General Manager would be appointed as a condition of effectiveness of the IDA credit. Advisors to TDA for management and final administration would be provided under the project. The Authority is to be responsible for overall development of agriculture in the Tihama. It would supervise the research and extension services, project investment works and the Wadi Mawr feasibility study. TDA would also prescribe regulations for water rights for both groundwater and surface water irrigation, and levy and collect charges. It would recover, through its charges and revenues, from the beneficiaries of the Wadi Zabid the project's full investment costs (without interest), over a period of 50 years as well as operational and maintenance costs. To assist the TDA, a firm of consultants was engaged on March 1, 1973 to design the project's works and supervise construction and carry out the Wadi Mawr feasibility study. The Kuwait Fund will meet payments to the new consultants prior to the effectiveness of the proposed credit. The foreign exchange cost of the consultants up to that date are estimated not to exceed \$150,000 and would be reimbursed from the IDA credit, which would also cover the costs subsequently incurred.

33. An Agricultural Credit Fund (ACF) would be established in the Central Bank to provide financing to Zabid and Mawr farmers for well drilling, landlevelling, and other on-farm development works. At this stage, the Central Bank is the only institution capable of handling such a service. Advisors will be provided to help devise and implement appropriate lending procedures.

It was agreed during negotiations that the Government would on-lend about \$2 million of the IDA credit to the ACF in the Central Bank at a rate of 4%. There is no organized credit for agriculture in Yemen presently, and even commercial lending is still in its infancy (total claims on the private sector were less than \$10 million in 1971). Therefore, on-lending rates to farmers cannot be fixed immediately but would be agreed upon with the Association after a study and recommendations by the ACF's advisors. The rates would be reasonably in line with commercial rates for similar loans, now about 9 to 11% per annum, and are expected to enable ACF to cover operating expenses and charges and to build up some reserves.

Staffing and Construction Schedule

34. About 25 Yemeni engineers, agriculturalists and credit officers will be required for the project. Counterpart staff is in extremely short supply in Yemen and suitable incentives such as salary supplements or repatriation bonuses may be required to provide the necessary local personnel for the project and retain them in public service. Our current experience with recruitment for the highway authority, created in conjunction with our recent highway credit to Yemen, has stressed this need. The TDA will be empowered to establish its own salary structure. It was agreed during negotiations that the Kuwait Fund, which is financing local costs of the project, would consider providing funds for salary supplements to qualified staff of the TDA under the project. This scheme would be implemented only after an evaluation of the effect of such arrangements on similar staff in the rest of the public sector.

35. The schedule for implementing the project foresees initiating the Wadi Mawr study immediately, so that it can be completed by June 1976. In Wadi Zabid, construction of minor roads and buildings should be put to tender as soon as the credit is effective. Irrigation works construction should start by July 1974 and be completed by March 1977.

Procurement and Disbursement

36. The surface irrigation works at Wadi Zabid would be awarded under international competitive bidding in accordance with the IDA Guidelines for Procurement. Construction of buildings and road works at Wadi Zabid and Wadi Mawr costing altogether about \$1.4 million, would be awarded to local contractors after local bidding. Well drilling might be done by TDA, with a rig procured under the project, as force account work. The building, road and drilling works are small, located at several isolated sites and timing of their construction is scattered; they are therefore not suitable to international competitive bidding. About \$1.0 million worth of equipment will be provided under the project, of which about \$0.35 million will be procured by international competitive bidding. The balance, consisting of specialized instruments and equipment of small unit value, would be procured locally or imported by direct purchase. Equipment items financed by the agricultural credit fund and costing more than \$10,000 each will also be subject to international competitive bidding.

37. The proceeds of the proposed credit would finance the foreign exchange cost of the project, as detailed hereunder:

- (a) civil works - the foreign exchange cost of foreign contractors and 42% of total expenditures for local contractors or force account work (representing the estimated foreign exchange component);
- (b) equipment and materials - the CIF cost of directly imported goods and 80% of total expenditures of imported goods procured locally;
- (c) technical services - the foreign exchange cost of consultants, advisors and overseas training; and
- (d) agricultural credit - 75% of payments made by ACF for loans made to its borrowers.

Disbursement requests will be supported by full documentation except for force account work and for loans less than \$30,000 equivalent made to farmers under agricultural credit, which will be disbursed against a statement of expenditures. The supporting documents for these expenditures will be retained by the executing agency and will be available for review by project supervision missions.

38. The agricultural output of the project, except cotton, would be domestically consumed either as subsistence foodgrains or as import substitution. The total cotton production of the project would contribute an insignificant portion of the world cotton trade and would not pose any marketing problem.

Land Tenure and Water Charges

39. The average farm income for privately-owned and tenant-operated farms would roughly double in Wadi Zabid as a result of the project. Currently about half of the land in Wadi Zabid is waqf land, one-third is owned by 25 tribal heads and leased to tenants, and the remainder (about 18%) is owned by 2,000 small farmers with an average farm size of about 1.5 ha. The individual large holding varies from 35 to 1,500 ha and averages about 240 ha per owner, some of whom live outside the project area. Most of the large holdings however, are farmed by tenants, with an average of about 9 ha per tenant. The existing land tenure system is the outcome of a centuries-old tribal system under which a tribe was considered an extended family group with the head of the tribe managing the land on which the tribe was settled. With time, the tribal heads became the owners of the land and other members the tenants. However, the tribal bonds are still strong and because of this, tenancy rights are virtually secure; in most cases tenancy passes from father to son.

40. Yemen is essentially still a conservative and, in places, a feudal society. The Government's capacity to introduce and execute development policies implying major social changes is still very limited despite the progress noted earlier in this report. There is no likelihood that a major restructuring of tenure and ownership patterns could be effectively legislated, let alone enforced, at the present time. However, it may be possible to introduce the principle of change in these patterns through measures that reduce income disparities, such as progressive water charges. The Government has affirmed the desirability of charging wealthier farmers a proportionately higher rate to cover the costs of operation and maintenance, and recovery of investment of the project's irrigation works. It was agreed during negotiations that the Government, with the help of the project consultants, will investigate the feasibility of introducing such a system and, if it is determined to be practicable, will prepare and implement a plan of progressive water charges.

Economic Justification

41. The project would generate significant increases in agricultural production which would result in higher income and employment opportunities for some 3,700 farm families and 2,500 landless farm laborers in the Wadi Zabid area. The Wadi Mawr feasibility study would lay the foundation for development of about 60,000 ha with major agricultural potential. The introduction of the first credit and extension services will have a major impact on the institutional development of the agricultural sector. The project at full development would increase the net cropped area by about 12%, and increase yields by about 50% for maize and oilseeds, 70% for sorghum and millet, 90% for cotton and 100% for vegetables. The "with-project" agricultural output would be valued at \$7.1 million, more than twice the output that could be expected without the project. This increase in the project's output contributes to foreign exchange saving both through increased exports and through import substitution. Leaving aside the costs of the Wadi Mawr feasibility study, the project's economic rate of return, including the cost of hired labor but shadow-pricing family labor contribution to zero, is estimated at 15%. The potential benefits from the Wadi Mawr study are evident but not readily quantifiable.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

42. The draft Development Credit Agreement between the Association and the Yemen Arab Republic, the Recommendation of the Committee provided for in Article V, Section I(d) of the Articles of Agreement and the text of a Resolution approving the proposed Development Credit are being distributed to the Executive Directors separately. The draft agreement conforms to the normal pattern for credits for irrigation projects.

43. I am satisfied the proposed development credit would comply with the Articles of Agreement of the Association.

PART VI - RECOMMENDATION

44. I recommend that the Executive Directors approve the proposed Development Credit.

Robert S. McNamara
President

Attachments

COUNTRY DATA - YEMEN ARAB REPUBLIC

<u>AREA</u>	<u>POPULATION</u>	<u>DENSITY</u>
Roughly 75,000 sq.m.	5-6 million (1971 est.) no census	65-80 per sq.m.
	Rate of growth: 2-3% (1960-70)	

POPULATION CHARACTERISTICS

Life expectancy: est. 30-40 years
Infant mortality: about 50%

HEALTH

Population per physician: 20,000 est.
Population per hospital bed: 1500-2500 est.

NUTRITION

Widespread malnutrition and
protein deficiency

EDUCATION

Literacy: Est. 10% of total population
School enrollment (1972): 133,000

GNP PER CAPITA IN 1972: \$90

<u>OUTPUT AND LABOR FORCE</u>	<u>% of GDP</u>	<u>% of Labor Force</u>
Agriculture	70-80	80-90
Other sectors	20-30	10-20

GOVERNMENT FINANCE (millions of rials)

	<u>FY69</u>	<u>FY70</u>	<u>Prov. FY71</u>	<u>Est. FY72</u>
Revenues	52	73	98	151
Expenditures	122	129	171	234
<u>Current Balance</u>	-70	-56	-73	-83
<u>Development expenditures</u> ^{1/}	23	81	83	56
<u>Overall Balance</u>	-93	-137	-156	-139
Domestic bank financing	70	45	37	-32
External financing	23	92	119	171

MONEY AND CREDIT (millions of rials)

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>J u n e</u>	
				<u>1971</u>	<u>1972</u>
Money supply	190	230	292	269	374
Quasi money	5	8	32	36	45
Credit to private sector	19	29	70	55	108
Net claims on government	118	151	110	141	109

^{1/} Equivalent to foreign project aid

BALANCE OF PAYMENTS (\$ millions)

	1969	1970	1971	Jan.-June 1972
Exports	8	6	6	4
Imports	-66	-89	-72	-48
Invisibles and worker remittances	42	45	47	36
Cash and commodity grants	5	18	6	13
Current Balance	-11	-20	-13	5
Non-monetary capital ^{1/}	11	30	31	9
Reserves, changes (-increase)	-	-10	-18	-14
<u>Reserve Position</u> (\$ millions)				
Net reserves of Central Bank	75	80	95	100 (June)
(of which: Free Reserves)	(1)	(7)	(23)	(32)(June)

RATE OF EXCHANGE (U.S.\$ per rial)

Free market rate (average)	22	18	19	20
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MERCHANDISE EXPORTS (Recorded)^{2/}

	Average, 1969-71	
	US\$mLn.	%
Coffee	1.4	38
Qat	0.6	16
Cotton	0.6	16
Hides and skins	0.5	14
Other	0.6	16
Total	3.7	100

EXTERNAL DEBT, June 30, 1972

	US\$mLn.
Public debt, incl. guaranteed	246
of which: disbursed	(147)
Debt service due 1972/73	10-20 ^{3/}
Debt service ratio, est. 1972/73	12-25 ^{4/}

RATE OF EXCHANGE ^{5/}

	Free Market Rates	
	1972 Average	March 1973
1 SDR	\$ 0.20	\$0.22
1 US\$	YR 5.0	YR4.5

IBRD/IDA LENDING
(as at February 28, 1973)

	US\$mLn.	
	IBRD	IDA
Outstanding and disbursed	-	-
Undisbursed	-	7.7
Outstanding incl. undisbursed	-	7.7

- ^{1/} Includes private and public capital, SDR's, and errors and omissions.
^{2/} Only about 50-60% of estimated total merchandise exports are recorded.
^{3/} This estimate was provided to the IBRD in September/October 1972, at which time data on the debt and debt service burden were still being assembled from various agencies.
^{4/} The debt service ratio is estimated on the basis of debt service as % of projected 1972 exports (including unrecorded) and net invisibles and remittances.
^{5/} No par value has been communicated to the IMF. However, Yemen agreed in 1972 to a provisional rate of US\$1 = YR5.

THE STATUS OF BANK GROUP OPERATIONS IN
THE YEMEN ARAB REPUBLIC

A. STATEMENT OF IDA CREDIT
(as at February 28, 1973)

<u>Credit Number</u>	<u>Year</u>	<u>Borrower</u>	<u>Purpose</u>	<u>US\$ Million</u>	
				<u>Amount (less cancellations)</u> <u>IDA</u>	<u>Undisbursed</u>
315	1972	Yemen Arab Republic	Highways	7.7	7.7
		Total		7.7	7.7
		Of which has been repaid		-	-
		Total now held by IDA		7.7	-
		Total undisbursed		-	7.7

B. STATEMENT OF IFC INVESTMENTS
(as at February 28, 1973)

- NIL -

C. OTHER BANK GROUP ACTIVITIES

A Bank grant of \$200,000 equivalent was approved by the Executive Directors in July 1971, to help finance, jointly with the Kuwait Fund for Arab Economic Development, a team of planning and economic advisors. This team of five advisors has helped establish the Central Planning Organization, which is responsible for preparing a development program, devising general economic policies, identifying and preparing investment projects, and coordinating external aid. The CPO is perhaps the most dynamic and active public sector organization in Yemen.

D. PROJECT IN EXECUTION ^{1/}

Credit 315 - Highways; US\$7.7 million Credit of June 26, 1972;
Closing Date: June 30, 1976.

The Yemen Government moved very quickly to establish a Highway Authority, appoint its director and select three different sets of project consultants (for technical assistance, feasibility studies and supervision of construction). Although the Development Credit was made effective only on January 15, 1973, this was due essentially to delays in the mails. The project is proceeding satisfactorily and the technical assistance team began work in Yemen on January 20, 1973.

^{1/} These notes are designed to inform the Executive Directors regarding the progress of projects in execution, and in particular to report any problems which are being encountered, and the action being taken to remedy them. They should be read in this sense, and with the understanding that they do not purport to present a balanced evaluation of strengths and weaknesses in project execution.

YEMEN ARAB REPUBLIC - TIHAMA DEVELOPMENT PROJECT

DEVELOPMENT CREDIT AND PROJECT SUMMARY

Borrower: Yemen Arab Republic
Amount: US\$10.9 million equivalent.
Terms: Standard

Project

Description:

The proposed project would consist of modernization of the existing irrigation system at Wadi Zabid, covering a net area of 17,000 ha, and a feasibility study for developing 60,000 ha from surface and groundwater at Wadi Mawr. Both wadis are in the Tihama (coastal) region of Yemen. Specifically, the project comprises:

1. Project works

at Wadi Zabid

- (i) ten diversion structures with gated intakes for canals;
- (ii) improvement of about 120 km of existing canals and construction of about 50 km of secondary canals;
- (iii) construction of control structures in canals and field outlets;
- (iv) installation of a radio flood warning network; and
- (v) construction of about 135 km of service and farm roads;

at Wadi Mawr:

- (i) a feasibility study for groundwater and surface water irrigation; and
 - (ii) an access road and building works including housing and offices for project staff.
2. The creation of institutions for agricultural research, extension and credit and consultant services

for these items plus design and construction supervision of project works in Wadi Zabid and the Wadi Mawr feasibility study.

3. Overseas training for selected Yemenis in engineering, agricultural credit, research and extension.
4. A credit component to finance loans for agricultural development in the project areas.

Estimated Cost:

	US\$ million		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Wadi Zabid			
Civil works	2.6	3.6	6.2
Land acquisition	0.1	-	0.1
Equipment	-	0.4	0.4
Engineering and Administration	<u>1.4</u>	<u>1.7</u>	<u>3.1</u>
Sub-Total	4.1	5.7	9.8
Wadi Mawr			
Civil works	0.5	0.3	0.8
Equipment	-	0.6	0.6
Engineering and Administration	<u>0.5</u>	<u>0.9</u>	<u>1.4</u>
Sub-Total	1.0	1.8	2.8
Agricultural Credit	<u>0.7</u>	<u>2.0</u>	<u>2.7</u>
Total	5.8	9.5	15.3
Contingencies	<u>0.8</u>	<u>1.4</u>	<u>2.2</u>
Grand Total	6.6	10.9	17.5

Financing Plan:

	US\$ million		
	Local	Foreign	Total
IDA Credit	-	10.9	10.9
Kuwait Fund	5.9	-	5.9
YAR Government	0.7	-	0.7
Project Farmers	6.6	10.9	17.5

Estimated Disbursements:

US\$ million							
FY	1973	1974	1975	1976	1977	1978	Cumulative Total
-	1.8	3.7	2.7	1.9	0.8	10.9	

Procurement Arrangements:

International competitive bidding would be followed for Wadi Zabid civil works and about 82 percent of the equipment to be financed under the project. Equipment items financed under the agricultural credit component and costing more than \$10,000 would also be procured by international competitive bidding. Local bidding would be followed for the construction of buildings and road works at Wadi Zabid (\$0.8 million) and Wadi Mawr (\$0.6 million). For certain equipment of a specialized nature of small unit value, totalling about \$190,000 international competition would be dispensed with.

Consultants:

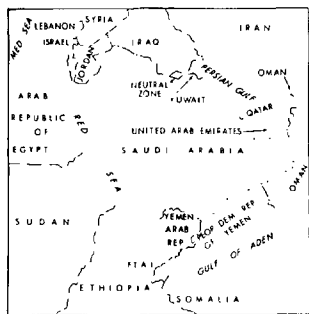
A consulting firm would be provided for (i) design and supervision of construction of the Wadi Zabid irrigation works, and (ii) the Wadi Mawr feasibility study. Consultants would also be provided for, (iii) the agricultural credit fund, and (iv) agricultural extension and research services at Wadi Zabid. Advisors for management assistance to TDA would be provided. Tipton and Kalmbach of Denver, USA, have been engaged for items (i) and (ii) above. Their services will be financed by the Kuwait Fund prior to effectiveness of the IDA Credit, on a reimbursable basis.

Rate of Return:

Economic return 13 percent. Excluding the Wadi Mawr feasibility study 15 percent.

Appraisal Report:

73a-YAR
March 27, 1973.

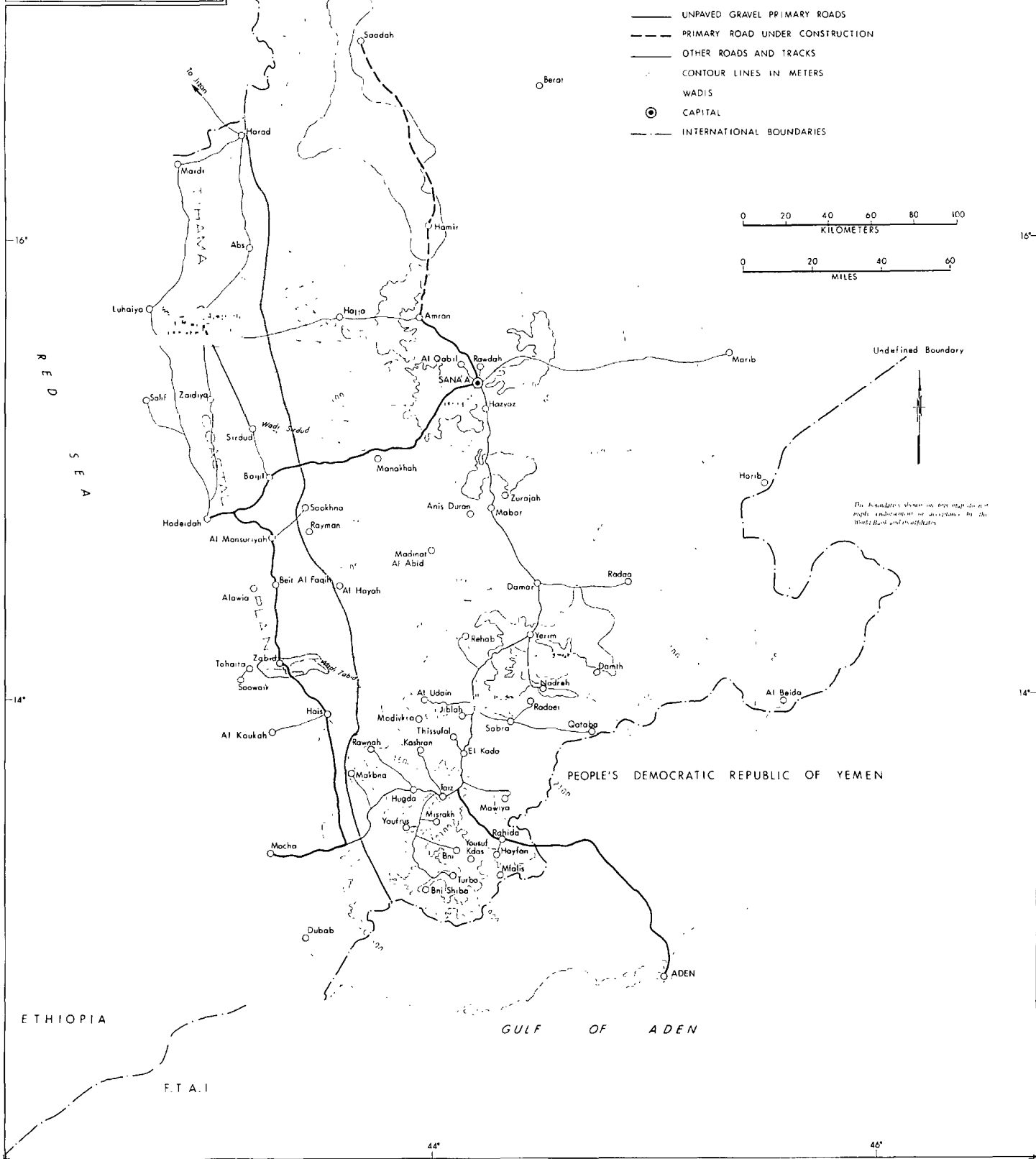


SAUDI ARABIA

YEMEN ARAB REPUBLIC

TIHAMA DEVELOPMENT PROJECT
SITE LOCATION

- PROJECT SITE WADI ZABID
- WADI MAWR FEASIBILITY STUDY AREA
- PROJECTED ACCESS ROAD
- TIHAMA REGIONAL BOUNDARY
- PAVED PRIMARY ROADS
- UNPAVED GRAVEL PRIMARY ROADS
- PRIMARY ROAD UNDER CONSTRUCTION
- OTHER ROADS AND TRACKS
- CONTOUR LINES IN METERS
- WADIS
- CAPITAL
- INTERNATIONAL BOUNDARIES



The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.

16°

14°

44°

46°