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**Report No. P-5277-YAR**

**MEMORANDUM AND RECOMMENDATION**  
**OF THE**  
**PRESIDENT OF THE**  
**INTERNATIONAL DEVELOPMENT ASSOCIATION**  
**TO THE**  
**EXECUTIVE DIRECTORS**  
**ON A**  
**PROPOSED CREDIT**  
**IN AN AMOUNT EQUIVALENT**  
**TO SDR 11.7 MILLION**  
**TO THE**  
**YEMEN ARAB REPUBLIC**  
**FOR THE**  
**TAIZ FLOOD DISASTER PREVENTION AND MUNICIPAL**  
**DEVELOPMENT PROJECT**

**MAY 25, 1990**

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### CURRENCY EQUIVALENT

US\$ 1.00 = Yemeni Rials (YRls) 12.00  
YR 1.00 = US\$ 0.06  
SDR 1.00 = US\$ 1.30  
- As of May 1990 -

### MEASURES AND EQUIVALENTS

1 millimeter (mm) = 0.04 inches  
1 meter (m) = 3.28 feet  
1 kilometer (km) = 0.62 miles  
1 hectare (ha) = 2.47 acres  
1 liter (l) = 0.21 gallons (Imp.)

### ABBREVIATIONS AND ACRONYMS

CPO - Central Planning Organization  
EHD - Environmental Health Department  
ERR - Economic Rate of Return  
FAD - Finance and Administration Department  
FLCCD- Federation of Local Council for Cooperative Development  
GTZ - Deutsche Gesellschaft für Technische  
Zusammenarbeit  
HCB - Housing Credit Bank  
HD - Housing Directorate  
IPA - Institute of Public Administration  
LCCD - Local Council for Cooperative Development  
MMH - Ministry of Municipalities and Housing  
MPW - Ministry of Public Works  
NPV - Net Present Value  
NWSA - National Water and Sewerage Authority  
PD - Project Department  
PPD - Physical Planning Department  
TBO - Taiz Branch Office  
UDHD - Urban Development and Housing Department  
UDPU - Urban Development Project Unit  
YAR - Yemen Arab Republic  
YGEC - Yemen General Electricity Authority

### FISCAL YEAR

January 1 - December 31

YEMEN ARAB REPUBLIC  
TAIZ FLOOD DISASTER PREVENTION AND MUNICIPAL  
DEVELOPMENT PROJECT

CREDIT AND PROJECT SUMMARY

Borrower: Yemen Arab Republic

Beneficiary: Ministry of Municipalities and Housing

Amount: SDR 11.7 million (US\$ 15 million equiv.)

Terms: Standard IDA terms, with 40 years maturity

Financing Plan:

Government	US\$ 7.25 million
IDA	<u>US\$15.00 million</u>
TOTAL	<u>US\$22.25 million</u>

Rate of Return: 12 percent

Staff Appraisal Report: Report No. 8468-YAR

Maps: IBRD No. 22142  
22143

MEMORANDUM AND RECOMMENDATION OF THE PRESIDENT  
OF THE INTERNATIONAL DEVELOPMENT ASSOCIATION  
TO THE EXECUTIVE DIRECTORS  
ON A PROPOSED CREDIT  
TO THE YEMEN ARAB REPUBLIC  
FOR THE TAIZ FLOOD DISASTER PREVENTION  
AND MUNICIPAL DEVELOPMENT PROJECT

1. The following memorandum and recommendation on a proposed development credit to the Yemen Arab Republic (YAR) for SDR 11.7 million (US\$ 15 million equivalent) is submitted for approval. The proposed credit would be on standard IDA terms with 40 years maturity and would finance the foreign exchange cost of the Taiz Flood Disaster Prevention and Municipal Development Project.

2. Background. Urbanization in the Yemen Arab Republic started rapidly in the early 1970s after the national reconciliation, which was characterized by a period of economic boom. The principal causes of this rapid urbanization are: (i) the high rate of increase in personal incomes; (ii) stagnation of agriculture; and (iii) the relative growth of government services. These urbanization trends are likely to continue, though moderately, given the economic situation prevailing in the Gulf countries, which has resulted in a reversal of migrant workers. Urbanization in YAR is among the lowest, as it represents only 16 percent of the total population of about 9.3 million (1986 census), but fastest growing throughout the Middle East. The urban population is quite widespread with a moderate concentration in the three largest cities. The 1986 populations of Sana'a, the capital, Taiz, the principal trading and agricultural processing center, and Hodeidah, YAR's main port, were about 430,000, 180,000, and 150,000, respectively (about 60 percent of the urban population). The remaining 40 percent of the urban population reside in secondary towns of less than 50,000 inhabitants. The populations of Sana'a and Taiz, on the other hand, have more than doubled in the past five years, growing at a rate of about 15 percent per annum.

3. As personal incomes and urban population increased in the 1970s and early 1980s, so did the uncontrolled sprawl of informal (but fairly well built) housing on to urban areas. However, the provision of urban services lagged behind, despite the Government's impressive efforts. Contributing factors to the growth in urban service deficiencies have been the absence of a formal land registration system, failure to fully recover the cost of services thereby eroding the Government's capacity to finance such services, and the use of unrealistic standards unaffordable to a large segment of the population.

4. Concerned with the mounting urban problems and the lack of coordination of the activities of the various ministries and agencies, the Government, in 1979, vested to the newly established Ministry of Municipalities and Housing (MMH) the responsibility for the physical planning and urban administration of the five main cities and of the secondary towns, while the Central Planning Organization (CPO) was charged with ensuring that the national urban development policy would be consistent with the broader national development strategies. The Government's strategy in the urban sector, therefore, focuses on providing essential municipal infrastructure while strengthening the institutional

capabilities at the central and local levels. In Taiz, however, the provision of municipal infrastructure has been hampered by the recurrent floods in the Old Taiz area, which cause: damage to private and public buildings and municipal infrastructure, disruption to traffic and business; hazard to human health; and risk to human life. In view of the foregoing, the Government's priority in Taiz is that of addressing the problems posed by recurrent floods.

5. Rationale for IDA Involvement. Given YAR's current difficult economic situation and the mounting pressure of its urban problems, IDA's strategy in the sector is focused on well targeted project work requiring minimum and directly recoverable investment with maximum use of existing resources. This project work is aimed at enhancing IDA dialogue with the Yemeni authorities while at the same time serving as a vehicle for addressing institutional and structural weaknesses (urban infrastructure maintenance, municipal resource mobilization and cost recovery) by building on the achievements already obtained from the first two ongoing urban development projects. The main lessons learned from these operations are that (i) sufficient time should be allowed for physical project implementation, and (ii) appropriate compensation should be offered to attract and retain qualified local personnel. These lessons have been taken into account in the design of the proposed project.

6. In the urban sector, IDA's strategy is to prepare the groundwork for broader policy oriented sectoral involvement and to set the stage for the principal element of urban development strategy for the long term, i.e., the creation of a viable administrative system which, as it develops, will delegate more responsibility to the municipalities and, at the same time, maximize private initiative. In the short run, however, it is expected that the central government will continue its policy of a highly centralized system. The proposed project supports Government and IDA strategy for the sector as it would address a major problem of flooding in the City of Taiz, the second largest urban area in the country, finance the implementation of recoverable infrastructure investments, and address structural weaknesses at the central and local levels through technical assistance and training and policy reforms.

7. Project Objectives. The main objectives of the proposed project are: (a) to provide most needed flood control structures to protect private and public buildings and infrastructure, and to minimize disruptions to the local economy and reduce the risks to human life; (b) to implement a project cost recovery mechanism at a municipal level, and to promote implementation of a national municipal resource mobilization policy; (c) to strengthen the urban management capabilities to the main branch offices; and (d) to strengthen MMH's institutional capacity to address urban problems more effectively.

8. Project Description. The proposed project consists of the flood control structures which will provide the essential protection to the area of the city (Old Town) most severely affected by floods. The project includes: (i) the essential flood control structures consisting of open channels, box culverts, sediment and boulder traps at various places in wadis Seena, Al Nassar, Madam and Al Kamet; (ii) the restoration of street pavement; the conservation of soils through the terracing of unstable slopes; surface drainage footpaths in narrow

streets to control erosion; and land acquisition (a total of seven houses); (iii) the purchase of equipment for the maintenance of roads and flood control structures; (iv) the institutional strengthening of the Ministry of Municipalities and Housing (MMH) and its main branch offices through technical assistance; and technical assistance for project construction management; (v) the introduction of a new municipal resource mobilization policy initiated under ongoing urban projects and implementation of project cost recovery; (vi) the hiring of consultants for the preparation of a future urban development project; and (vii) the training of MMH's and its main branch offices staff.

9. MMH will be the implementing agency through its Housing Directorate. The project will be implemented over a period of eight years. The total cost of the project, excluding taxes and customs duties (government projects are exempt), is estimated at US\$ 22.25 million equivalent, with a foreign exchange component of US\$ 15 million. A breakdown of costs, and the financing plan, are shown in schedule A. Amounts and methods of procurement and disbursement, and the disbursement schedule, are shown in schedule B. A timetable for key project processing events and the status of Bank Group operations in the YAR are given in schedules C and D respectively. Maps showing the project location and the project area are also attached (IBRD No. 22142 and 22143). The Staff Appraisal Report No. 8468-YAR dated May 25, 1990 is being distributed separately.

10. Agreed Actions. The Government has agreed on the following actions: (a) acquire land and relocate about seven families, in a manner satisfactory to IDA, by December 1990; (b) appoint project implementation and management staff by December 1990; (c) employ advisors for technical assistance by various dates before December 1991; (d) submit by May 1991, for IDA's review, a draft national municipal resource mobilization policy; obtain Cabinet's approval by January 1992; and seek Parliament's approval of such a policy by September 1992; and (e) implement, by January 1996, project cost recovery for Taiz based on a mechanism satisfactory to IDA.

11. Justification. The proposed project is the least-cost solution in terms of yielding maximum benefits and yet providing adequate safeguards for the protection of both human life and property. The project will also benefit 1,540 low income households residing in the flood affected area, representing about 30 percent of the directly benefited population. Major economic benefits will result from the avoidance of flood related damage to property and infrastructure. The project will yield significant environmental gains by minimizing hazards now posed by domestic refuse, sand, gravel and boulders which flood waters

deposit on main streets as well as by avoiding sewage overflows on streets. No historical buildings will be affected by the proposed project. The project will provide further institutional strengthening of MMH and its municipal branch offices, for improving the level of service and operating efficiencies. The project will also provide assistance to MMH for addressing natural disaster prevention (including early warning systems) through appropriate planning and development policies. The project will promote the implementation of a national municipal resource mobilization policy and introduce cost recovery on a citywide basis. The internal economic rate of return is 12 percent.

12. Risks. Two types of construction risks are foreseen, one related to the normal construction of civil works and the other associated with floods that could damage structures under construction and further aggravate the dangers normally posed by such calamities. Both types of risks, however, will be minimized through strict construction requirements included in the tender specifications, and by qualified supervision. The flood control structures have been designed with temporary provisions for use during construction. Two IDA supervision missions per year will be scheduled to ensure that the project implementation proceeds on schedule, and that qualified construction supervision is provided.

13. Recommendation. I am satisfied that the proposed credit would comply with the Articles of Agreement of the Association and recommend that the Executive Directors approve the proposed credit.

Barber B. Conable  
President

Attachments  
Washington DC  
May 25, 1990

Schedule A

YEMEN ARAB REPUBLIC  
TAIZ FLOOD DISASTER PREVENTION AND MUNICIPAL  
DEVELOPMENT PROJECT  
ESTIMATED COST AND FINANCING PLAN

Estimated Project Cost

	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
	----- (US\$ million) -----		
Civil Works	3.52	9.62	13.14
Maintenance Equipment	0.05	0.90	0.95
Land Acquisition	0.70	-	0.70
Project Management	0.05	1.20	1.25
Technical Assistance and Training	<u>0.05</u>	<u>1.00</u>	<u>1.05</u>
Total Base Cost (May 1990 prices)	4.37	12.72	17.09
Physical Contingencies	0.35	0.96	1.31
Price Contingencies	<u>2.53</u>	<u>1.32</u>	<u>3.85</u>
Total Project Cost	<u>7.25</u>	<u>15.00</u>	<u>22.25</u>

Financing Plan:

	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
	----- (US\$ million) -----		
Government	7.25	-	7.25
IDA	<u>-</u>	<u>15.00</u>	<u>15.00</u>
Total Financing	<u>7.25</u>	<u>15.00</u>	<u>22.25</u>

Schedule B

**YEMEN ARAB REPUBLIC**  
**TAIZ FLOOD DISASTER PREVENTION AND MUNICIPAL**  
**DEVELOPMENT PROJECT**  
**PROCUREMENT METHOD AND DISBURSEMENTS**

<u>Project Component</u>	<u>Procurement Method<sup>a</sup></u>				<u>Total</u>
	<u>ICB</u>	<u>LCB</u>	<u>Int. Shop</u>	<u>Other</u>	
	<u>US\$ Million</u>				
Civil Works	15.70 (10.20)	2.40 (1.50)	-	-	18.10 (11.70)
Maintenance			1.00	-	1.00
Equipment	-	-	(1.00)	-	(1.00)
Land Acquisition				0.70 (0.00)	0.70 (0.00)
Project Management	-	-	-	1.35 (1.30)	1.35 (1.30)
Technical Assistance & Training	-	-	-	1.10 (1.00)	1.10 (1.00)
<b>TOTAL</b>	<b>15.70</b> <b>(10.20)</b>	<b>2.40</b> <b>(1.50)</b>	<b>1.00</b> <b>(1.00)</b>	<b>3.15</b> <b>(2.30)</b>	<b>22.25</b> <b>(15.00)</b>

/a Figures in parenthesis are the amounts to be financed under the IDA credit.

**CREDIT DISBURSEMENTS**

<u>Category</u>	<u>Description</u>	<u>Amount</u> <u>US\$Million</u> <u>Equivalent</u>	<u>Percent of</u> <u>Expenditures</u> <u>to be Financed</u>
1.	Civil Works	10.6	65%
2.	Equipment	1.0	100% of foreign expenditures
3.	(a) Consultants' Services for project management	1.3	100% of foreign expenditures and 90% of local expenditures
	(b) Consultants' Services for technical assistance	1.0	100% of foreign expenditures and 90% of local expenditures.
4.	Unallocated	1.1	
	<b>TOTAL</b>	<b>15.0</b>	

Schedule B Contd.

Estimated Disbursements:

	<u>IDA Fiscal Year</u>									
	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	
Annual	1.00/a	2.75	3.75	2.70	2.10	0.90	0.75	0.75	0.30	
Cumulative	1.00	3.75	7.50	10.20	12.30	13.20	13.95	14.70	15.00	

/a Includes an initial deposit of US\$1.0 million to a Special Account.

Schedule C

YEMEN ARAB REPUBLIC  
TAIZ FLOOD DISASTER PREVENTION AND MUNICIPAL  
DEVELOPMENT PROJECT

Timetable of Key Processing Events

(a) Time taken to prepare the project:	three years <u>1/</u>
(b) Prepared by:	MMH, Consultants
(c) First IDA mission:	January 1987
(d) Appraisal mission departure:	January 1990
(e) Negotiations:	April 1990
(f) Planned date of effectiveness:	February 1, 1991
(g) List of relevant PCRs and PPARs:	None <u>2/</u>

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1/ The three years correspond to the time required for the preparation of the urban upgrading project as originally conceived, of which only one year has been spent on the preparation of the flood prevention project.

2/ The first two credits in the urban sector (Cr. 1202 and 1441-YAR) are currently under implementation.

THE STATUS OF BANK GROUP OPERATIONS IN THE YEMEN ARAB REPUBLIC

A. Statement of IDA Credits  
(As of March 31, 1990)

Credit Number	Year	Borrower	Purpose	Amount (\$ million) (less cancellations)	
				IDA Credit	Undisbursed
Twenty-nine credits fully disbursed				231.6	
1025	1980	Yemen Arab Republic	Fisheries Development	17.0	3.6
1202	1982	Yemen Arab Republic	Sana's Urban Development	15.0	4.0
1259	1982	Yemen Arab Republic	Agr. Research and Development	6.0	1.2
1294	1982	Yemen Arab Republic	Health	10.5	3.1
1308	1982	Yemen Arab Republic	Agricultural Credit	8.0	1.4
1340	1983	Yemen Arab Republic	Education V	10.0	4.4
1361	1983	Yemen Arab Republic	Power III	19.0	7.5
1419	1983	Yemen Arab Republic	Highways V	13.0	5.6
1441	1984	Yemen Arab Republic	Urban II	12.0	8.9
1453	1984	Yemen Arab Republic	Central Highlands Ag. Devt.	8.0	4.5
1470	1984	Yemen Arab Republic	Education VI	10.0	8.3
1547	1985	Yemen Arab Republic	Industrial Development II	8.0	6.6
1556	1985	Yemen Arab Republic	TA to CFO	4.7	4.1
1584	1985	Yemen Arab Republic	Wadi Al Jawf Ag. Devt.	10.0	12.4
1645	1986	Yemen Arab Republic	Technical Training	12.7	13.2
1667	1986	Yemen Arab Republic	Tihama V Regional Ag.	10.0	10.3
1701	1986	Yemen Arab Republic	Power IV	11.7	13.4
1702	1986	Yemen Arab Republic	TA Petroleum Sector	12.0	10.1
1726	1986	Yemen Arab Republic	Marib-Safir Road	10.0	1.8
1772	1987	Yemen Arab Republic	S. Regional Agr. Devt.	12.3	10.3
1773	1987	Yemen Arab Republic	Teacher Training	10.4	8.7
1848	1988	Yemen Arab Republic	Sana's Hodeidah Road Rehab.	10.7	9.0
1886	1988	Yemen Arab Republic	Northern Regional Agr. Devt.	17.6	14.8
1883	1989	Yemen Arab Republic	Eastern Region Agr. Devt.	15.0	14.2
2015	1989	Yemen Arab Republic	Institutional Development for Public Administration	10.8	10.6
Totals (excluding 3/) of which has been repaid				516.0	199.0
Total now held by IDA				6.7	
				509.3	

1/ The status of projects listed in Part A is described in a separate report on all Bank/IDA financed projects in execution, which is updated twice yearly and circulated to the Executive Directors on April 30 and October 31.

2/ Beginning with Credit 1202-YAR, credit amounts have been denominated in Special Drawing Rights (SDRs). The dollar amounts in these columns represent the dollar equivalents at the time of credit negotiations for the IDA amounts and the dollar equivalents as of March 31, 1990, for the undisbursed amounts.

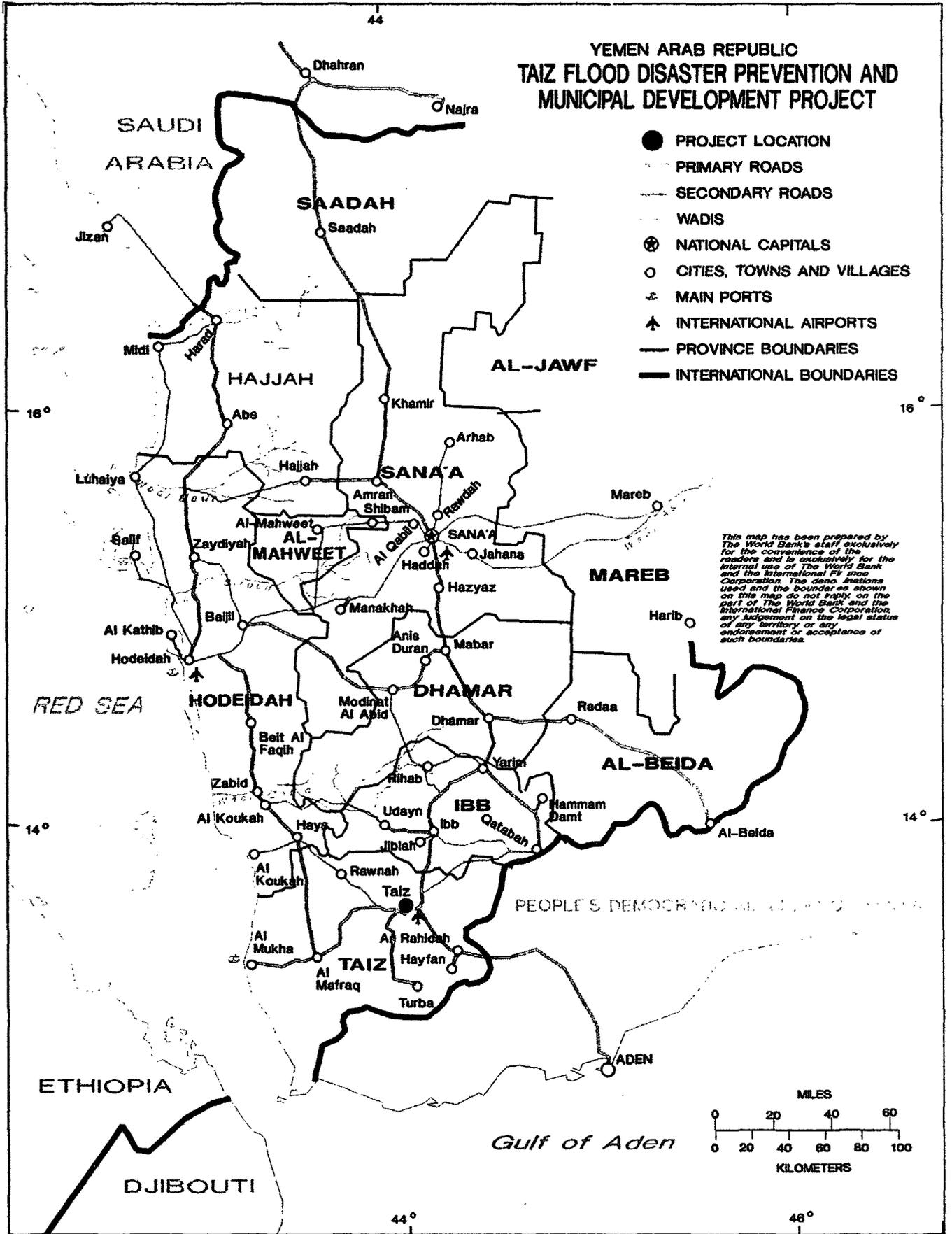
3/ Not yet effective.

**B. Statement of IFC Investments  
(As of March 31, 1980)**  
**YEMEN ARAB REPUBLIC**

Year	Collisor	Type of Business	(Amount in \$ million)		
			Loan	Reserve	Total
1978	Yemen Dairy and Juice Industries Co., Ltd.	Dairy Products	3.15	--	3.15
1983/ 1985	Yemen Dry Batteries	Dry Cell Batteries	3.25	0.90	4.15
1984	National Company for Vegetable Oil and Ghee Industries	Vegetable Oil	4.65	--	4.65
1985	Yemen Hunt Oil Company	Oil Refinery	8.00	--	8.00
1986	Marib Agriculture Company	Citrus Fruit	2.40	0.30	2.70
	Total Gross Commitments Less cancellations, terminations, repayments, sales and exchange rate adjustments		22.45	1.20	23.65
	Total commitments now held by IFC		<u>11.85</u>	<u>--</u>	<u>11.85</u>
	Total Disbursed		11.85	--	11.85
	Total Undisbursed		0.00	0.00	0.00

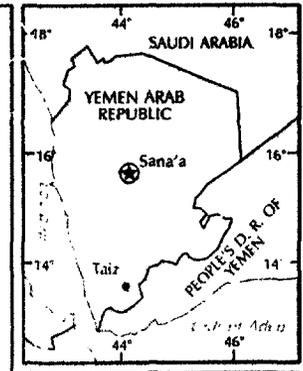
# YEMEN ARAB REPUBLIC TAIZ FLOOD DISASTER PREVENTION AND MUNICIPAL DEVELOPMENT PROJECT

- PROJECT LOCATION
- PRIMARY ROADS
- SECONDARY ROADS
- - - WADIS
- ⊗ NATIONAL CAPITALS
- CITIES, TOWNS AND VILLAGES
- ⚓ MAIN PORTS
- ✈ INTERNATIONAL AIRPORTS
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES

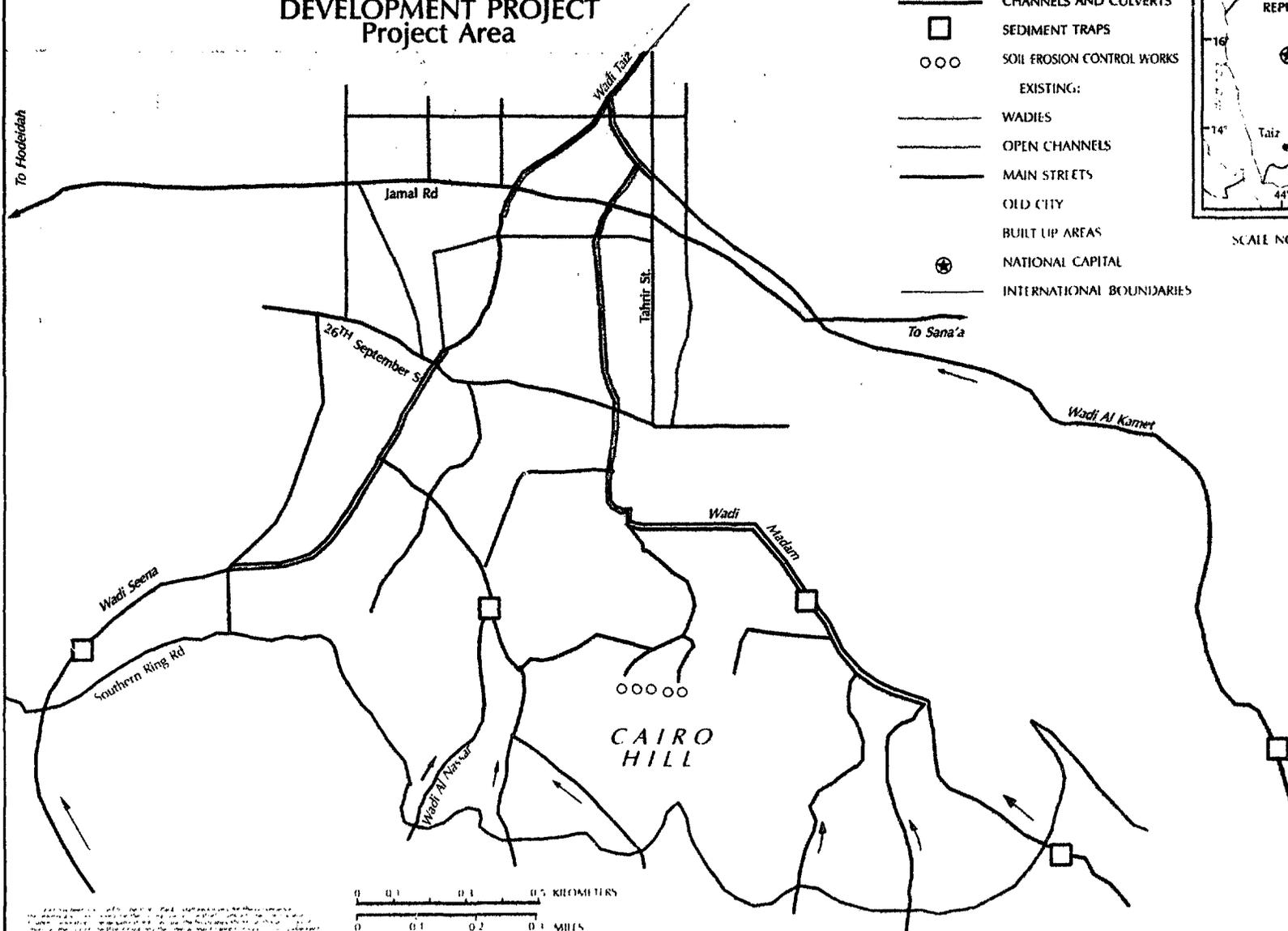


YEMEN ARAB REPUBLIC  
**TAIZ FLOOD DISASTER PREVENTION AND MUNICIPAL  
 DEVELOPMENT PROJECT**  
 Project Area

- PROPOSED:**
- CHANNELS AND CULVERTS
  - SEDIMENT TRAPS
  - SOIL EROSION CONTROL WORKS
- EXISTING:**
- WADIES
  - OPEN CHANNELS
  - MAIN STREETS
  - OLD CITY
  - BUILT UP AREAS
  - ⊙ NATIONAL CAPITAL
  - INTERNATIONAL BOUNDARIES



SCALE NOT AVAILABLE



MARCH 1990

IBRD 23113