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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 7.9 MILLION
TO
THE PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
FOR AN
EMERGENCY FLOOD RECONSTRUCTION PROJECT

NOVEMBER 8, 1989

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PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

CURRENCY AND EQUIVALENT UNITS

As of October 1989

The official currency unit in the People's Democratic Republic of Yemen is the Yemeri Dinar (YD).

US\$1.00	-	YD 0.345
YD 1.00	-	US\$ 2.898
US\$1.28	-	SDR 1.000
US\$1.00	-	SDR 0.784

LIST OF ABBREVIATIONS

DFRC	District Flood Relief Committees
DOI	Department of Irrigation
EFRP	Emergency Flood Reconstruction Project
ERU	Emergency Reconstruction Unit
FAO	Food and Agriculture Organization
FRP	Flood Reconstruction Program
GFRC	Government Flood Relief Committees
HCFRC	High Committee for Flood Relief Coordination
ICB	Internacional Competitive Bidding
MAAR	Ministry of Agriculture and Agrarian Reform
MCH	Ministry of Construction and Housing
MOE	Ministry of Education
MOH	Ministry of Health
PDRY	People's Democratic Republic of Yemen
SOE	Statement of Expenditures
UNDP	United Nations Development Programme
UNDRO	United Nations Disaster Relief Organization
UNICEF	United Nations Children's Fund

GOVERNMENT FISCAL YEAR

January 1 - December 31

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT
CREDIT AND PROJECT SUMMARY

Borrower: People's Democratic Republic of Yemen

Beneficiaries: Ministry of Construction and Housing;
Ministry of Education;
Ministry of Agriculture and Agrarian Reform;
Ministry of Health

Amount: SDR 7.9 million (US\$ 10.0 million equivalent)

Terms: Standard IDA terms with 40 years maturity

Financing Plan:

IDA	US\$ 10.0 million
UNDP	US\$ 1.0 million
GOVERNMENT	<u>US\$ 4.4 million</u>
TOTAL	<u>US\$ 15.4 million</u>

Economic Rate of Return: Not applicable.

Staff Appraisal Report: Not applicable. A Technical Annex has been prepared and is attached.

Map: IBRD No. 21899.

**MEMORANDUM AND RECOMMENDATION OF THE PRESIDENT
OF THE INTERNATIONAL DEVELOPMENT ASSOCIATION
TO THE EXECUTIVE DIRECTORS
ON A PROPOSED CREDIT
TO THE PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
FOR AN EMERGENCY FLOOD RECONSTRUCTION PROJECT**

1. The following memorandum and recommendation on a proposed development credit to the People's Democratic Republic of Yemen for SDR 7.9 million (US \$10 million equivalent) is submitted for approval. The proposed credit would be on standard IDA terms with 40 years maturity and would help finance an Emergency Flood Reconstruction Project, which is part of a larger Flood Reconstruction Program. The project would be co-financed by the United Nations Development Programme (UNDP) for about US\$ 1.0 million equivalent.

2. Background. In March and April of this year, heavy rainfall and widespread flooding caused devastating damage to houses, buildings, flood control and irrigation structures, crops, livestock and public infrastructure in the five Governorates of Hadramawt, Shabuwa, Al-Mahra, and to a lesser extent in Abyan and Lahej. Total direct damages have been estimated at about \$161 million. In monetary terms, most of the damage affected the housing sector, accounting for \$90 million or about 56 percent of total damages. The flooding caused the death of at least 23 persons and damaged or destroyed 4,200 houses, or about three percent of the country's housing stock, leaving around 30,000 people homeless. Ten schools were completely destroyed, 443 primary and secondary schools sustained damage, and many other education facilities are now occupied by homeless families. As a result, about a quarter of a million students will be deprived of normal school attendance at least for the next one to two years. Essential health services have also been interrupted, and portions of the highway system were damaged. An estimated \$24 million of damages occurred in the irrigation subsector and included broken weirs, canals, pumping facilities, wells and machinery. Many flood control bunds were destroyed thereby endangering rural communities and jeopardizing crop production, while elsewhere, wadi courses require new control structures. In addition, about 6 percent of total annual agricultural production was destroyed, 5,500 animals were lost, and about 20,000 hectares of arable land in the country suffered serious erosion.

3. Emergency relief efforts began almost immediately after the heavy rains and flooding with assistance from the United Nations Disaster Relief Organization (UNDRO) and coordinated by the UNDP. Many donors, including international, regional, governmental and non-governmental organizations, provided assistance towards the immediate relief needs of the flood victims through the provision of food, medicines, blankets and temporary shelter, as well as emergency medical relief, amounting to \$6 million. These efforts were successful and prevented the potential outbreak of epidemics.

4. On March 23, 1989 the Government created a High Committee for Flood Relief Coordination (HCFRC) headed by a Deputy Prime Minister (and Minister of Interior), to handle all flood disaster relief activities and coordinate with

aid donors on the reconstruction effort. An IDA mission visited PDRY in May/June 1989 to assist the Government in assessing the flood damage and in preparing a Flood Reconstruction Program (FRP). The Government's Flood Reconstruction Program has been designed to include essential reconstruction and rehabilitation requirements to be carried out during the 1989-94 period. The estimated cost of the total FRP amounts to about \$105 million. In late August 1989, the Government requested IDA to co-host a meeting with potential donors to discuss possible financial participation in the Government's FRP. This meeting was held in Washington D.C. on September 28, 1989 during the Bank/IMF Annual Meetings. In addition to a contribution of \$1 million from UNDP for the proposed project, the Islamic Development Bank is providing about \$2 million for the rehabilitation of health and education facilities. Other donors are reallocating funds under existing operations and reviewing the contents of future lending operations to support the Government's FRP.

5. Economic Impact. The March/April 1989 rains and flash flooding caused considerable physical damage and interrupted economic activity throughout the country. The Government's assessment of total damages (para. 2) represents about 13 percent of GDP in 1989. The level of economic activity in both 1989 and 1990 will no doubt be affected due to agricultural crop losses of about \$6 million (wheat, cotton and tobacco) and disruption of transport, communications, services and trade. Despite continued high levels of investment (about 35 percent of GNP) financed mostly from concessional foreign assistance, the Government estimates that the overall real growth rate will be lower than expected, i.e. about 2 percent during 1989 and 1990 as against 4 percent anticipated for the same period prior to the floods.

6. The recent rains and floods hit the country at a time when it is experiencing a difficult economic situation. The fiscal deficit is estimated to reach an unprecedented \$832 million (about 60 percent of GNP) and the current account deficit is estimated at \$300 million (about 22 percent of GNP). Indications are that the Government intends to introduce reforms in order to reduce the fiscal deficit mainly by drastic cuts in capital expenditures. Efforts will also be made to increase revenues by about 10 percent through increases in import duties, consumption taxes and contributions from a few public sector enterprises. The current account deficit of the balance of payments is also expected to be reduced to about \$150 million in 1990, reflecting a sharp reduction of imports mainly for capital goods. Although PDRY's external debt has increased in recent years, debt service payments remain manageable (16 percent of foreign exchange earnings in 1989), reflecting both the concessional terms of the debt as well as the rescheduling of principal and interest payments to socialist countries. In the medium term, prospects for a sustained recovery are reasonable because of the recently discovered oil which is expected to generate about \$150-\$250 million per year in export earnings as of 1992. However, there is also an urgent need for changes in policies aimed at easing existing rigidities and distortions in price structures, of liberalizing trade, providing more opportunities for private sector activities, and improving the performance of public sector enterprises.

7. Immediate IDA Reconstruction Support. To support immediate reconstruction efforts, IDA has amended the Fourth and Fifth Highways Credit Agreements (Credits

1617-YDR and 1823-YDR) to avail about \$7 million in credit proceeds for the repair of flood damaged asphalt roads. About \$2 million in proceeds from the Fourth Education Project (SF-19-YDR) have also been reallocated for the rehabilitation of about 25 flood damaged schools.

8. Rationale for IDA Involvement. IDA has traditionally been involved in most of the sectors that sustained flood damages. The proposed project would support the Government's objectives to restore economic productivity and social services that were severely disrupted as a result of the recent rains and flooding. In order to provide assistance to the Government after the 1982 rains and flash flooding which caused major damage to key sections of the highway network and to bridges located in the Abyan and Aden Governorates, IDA approved a credit of US \$7 million equivalent for a Roads Flood Reconstruction Project (Credit 1295-YDR). The Project Performance Audit Report No. 7311 dated June 24, 1988 noted that project objectives were met. The main lesson learned was to ensure that adequate institutional arrangements for project implementation are in place at the outset. This has been taken into account in the design of the proposed project.

9. In addition to the proposed project, IDA's strategy has been to (i) assist in the flood damage assessment immediately following the rains and flooding and in developing a five-year Flood Reconstruction Program; (ii) help the Government to mobilize donor assistance in support of the FRP; (iii) reallocate about \$9 million in proceeds from three ongoing IDA operations in the highways and education sectors to provide immediate support to the Government's reconstruction efforts; and (iv) review the content of IDA's country assistance program for PDRY to accommodate, in the medium to long term, possible projects aimed at flood mitigation and prevention, and refocus sector work to address flood preparedness and prevention measures.

10. Project Objectives. The proposed Emergency Flood Reconstruction Project would help restore the country's essential economic infrastructure destroyed or damaged by the heavy rains and flooding and reduce human deprivation and suffering through restoration of social services and shelter. It would strengthen PDRY's institutional capacity to manage disaster recovery programs and develop future programs to mitigate the country's vulnerability to floods. The proposed project would also serve as a catalyst for donor financing and coordination of the reconstruction effort.

11. Project Description. The proposed project would finance a self-contained portion of the most urgent components of the Government's Flood Reconstruction Program, and would consist of the provision of materials, equipment and civil works for: (i) the construction of low-cost housing units to replace totally destroyed housing; (ii) the rehabilitation and equipping of damaged schools; (iii) the rehabilitation of flood protection and irrigation structures (flood bunds, weirs, and wadi embankments); and (iv) the rehabilitation of damaged health centers, hospitals and health units and the replacement of medical equipment. Technical assistance would be included for a flood preparedness and mitigation study and consultants' services in engineering, construction contract management and construction supervision to assist in project implementation. The

specific rehabilitation and reconstruction works to be financed under the proposed project would be selected on the basis of general criteria to be applied to all sectors, as well as specific sectoral criteria. These criteria and eligibility guidelines for beneficiaries of the housing reconstruction program have been discussed and agreed with the Government. A more detailed description of the Government's FRP, the components of the proposed project and the eligibility criteria is provided in the Technical Annex (paras. 25, 26 and Annex II).

12. Project Cost and Financing. The total cost of the project is estimated at \$15.4 million equivalent, with a foreign exchange component of \$7.6 million which amounts to about 49 percent of total project costs. The proposed project has been exempted from custom duties and taxes. IDA's financial contribution to the proposed project would be SDR 7.9 million (US\$ 10 million equivalent) which amounts to 65 percent of total project costs. Local cost financing by IDA is justified in view of the emergency nature of the project and the extra Government budgetary burdens generated by the floods. The UNDP is providing \$1 million equivalent on a grant basis. A breakdown of costs and the financing plan are shown in Schedule A. Through the proposed project and the reallocation of IDA proceeds, IDA would finance about 9.5 percent and 8.5 percent, respectively, of the total cost of the Government's FRP, or 34 percent of the total foreign exchange component of the FRP. Because of the emergency import needs and the shortage of foreign exchange, the proposed credit would include retroactive financing of up to about six percent of the credit amount for materials and equipment expenditures required for critical reconstruction works which are incurred after October 31, 1989.

13. Project Implementation. The project will be implemented under the general supervision of an Emergency Reconstruction Unit (ERU) which reports directly to the Deputy Minister of Planning, who in turn, reports to the Deputy Prime Minister and Chairman of the HCFRC. The ERU will be headed by a National Reconstruction Coordinator and will consist of a Sector Coordinator appointed from each of the technical agencies involved in the reconstruction effort. These agencies already have technical departments familiar with IDA procedures and their responsibilities are as follows:

- (i) the Ministry of Construction and Housing will be responsible for housing reconstruction and rehabilitation to the highways network;
- (ii) the Ministry of Agriculture and Agrarian Reform will be responsible for rehabilitation of irrigation and flood protection schemes, and for the carrying out of the flood preparedness and mitigation study under the general guidance of the Ministry of Planning;
- (iii) the Ministry of Education will be responsible for the rehabilitation and equipping of damaged schools; and

- (iv) the Ministry of Health will be responsible for the rehabilitation of damaged health institutions and for the provision of medical equipment.

IDA has long-standing working relationships with the above mentioned ministries which are all implementing satisfactorily ongoing IDA financed projects. The ERU will also coordinate donor activities and supervise the implementation of the proposed project with assistance from technical advisers. An annual implementation review, to be carried out jointly between the Government and IDA, would assess progress made towards the implementation of the proposed project and agreed monitoring targets, and the Flood Reconstruction Program. Physical works under the proposed project would be implemented over a two and a half year period. The methods of procurement and disbursement, as well as the disbursement schedule are shown in Schedule B. A timetable of key processing events and the status of Bank Group operations in PDRY are provided in Schedules C and D, respectively. A map is also attached.

14. Agreed Actions. The Government has agreed on the following actions: (i) eligibility criteria for works being financed under the proposed project and for selection of beneficiaries under the housing reconstruction program; (ii) recovery of costs from each beneficiary of a new low-cost housing unit, equivalent to at least 15 percent of the household's monthly income until the total cost of such housing unit is paid in full; (iii) an annual review of project implementation and of the forthcoming year's investment program; and (iv) completion of a flood preparedness and mitigation study not later than January 1, 1992. As conditions of effectiveness, the Government would (i) establish an Emergency Reconstruction Unit (for which a National Reconstruction Coordinator to head the ERU and the Sectoral Coordinators have already been selected); and (ii) confirm execution of the UNDP Grant Agreement.

15. Benefits and Risks. The proposed project would reduce the impact of future floods on the housing sector by constructing houses in non-flood prone areas, decrease human suffering by providing shelter to the homeless, help to normalize the education system and health services, and assist in the restoration of agricultural productivity and flood protection structures. Low income groups have been targeted to be the main beneficiaries of the housing reconstruction efforts. To the extent feasible, labor-intensive methods will be used and are estimated to generate about 5,000 new job opportunities in the construction sector for low income families. The proposed flood preparedness and mitigation study would recommend administrative reforms to introduce a flood preparedness program and engineering measures to reduce the country's vulnerability to similar disasters. Therefore the proposed project is expected to have a positive impact on the social and physical environment.

16. The main risk associated with the proposed project relates to potential implementation delays due to the limited administrative and institutional capacity of Government agencies. This risk would be minimized through the provision of technical assistance to the ERU and ministries involved in project execution. Moreover, a combined annual implementation and investment review between the Government and IDA will ensure close monitoring of project implementation. Finally, intensive levels of IDA project supervision are envisaged during the first two years of execution.

17. 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

by Ernest Stern

Attachments
Washington D.C.

November 8, 1989

SCHEDULE A

**PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT**

Estimated Project Costs 1/

Sector	Local	Foreign	Total	Local	Foreign	Total
	YD Million			US\$ Million		
HOUSING	1.34	1.10	2.44	3.89	3.18	7.07
EDUCATION	0.29	0.29	0.58	0.84	0.83	1.67
AGRICULTURE/FLOOD CONTROL	0.27	0.27	0.54	0.78	0.79	1.57
HEALTH	0.21	0.26	0.47	0.61	0.75	1.36
TECHNICAL ASSISTANCE	0.11	0.19	0.30	0.31	0.57	0.88
FLOOD PREPAREDNESS STUDY	0.10	0.15	0.25	0.29	0.43	0.72
Base Cost (October 1989)	2.32	2.26	4.58	6.72	6.99	13.27
CONTINGENCIES:						
Physical	0.23	0.23	0.46	0.67	0.66	1.33
Price	0.13	0.13	0.26	0.38	0.38	0.76
Subtotal	0.36	0.36	0.72	1.05	1.04	2.09
TOTAL PROJECT COST	2.68	2.62	5.30	7.77	7.99	15.36

Project Financing Plan
(US \$ million)

	Local	Foreign	Total
IDA	3.1	6.9	10.0
GOVERNMENT	4.4	0.0	4.4
UNDP	0.3	0.7	1.0
	7.8	7.6	15.4

1/ Net of taxes and duties.

SCHEDULE BPEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECTPROCUREMENT ARRANGEMENTS FOR PROJECT COMPONENTS
(US\$ Million)

<u>Project Components</u>	<u>Procurement Methods</u>				
	<u>ICB</u>	<u>LCB</u>	<u>FA</u>	<u>Other</u>	<u>Total</u>
Materials and Equipment	0.88 (0.79)	-	-	0.66 (0.59)	1.54 (1.38)
Civil Works	-	11.13 (7.77)	0.84 (0.00)	-	11.97 (7.77)
Technical Assistance	-	-	-	1.00 (0.00)	1.00 (0.00)
Flood Study	-	-	-	0.85 (0.85)	0.85 (0.85)
<u>TOTAL</u>	0.88 (0.79)	11.13 (7.77)	0.84 (0.00)	2.51 (1.44)	15.36 (10.00)¹

DISBURSEMENTS

<u>Credit Category</u>	<u>Credit Allocation</u> <u>(US\$)</u>	<u>% of Expenditures</u> <u>to be financed</u>
Civil Works	7,200,000	70%
Materials and Equipment	1,000,000	100% of foreign expenditures
Consultants	800,000	100%
Unallocated	<u>1,000,000</u>	
Total	<u>10,000,000</u>	

ESTIMATED DISBURSEMENTS
(US\$ Million)

	<u>FY90</u>	<u>FY91</u>	<u>FY92</u>	<u>FY93</u>
Annual	1.5	3.2	3.4	1.9
Cumulative	1.5	4.7	8.1	10.0

¹Figures in parenthesis are the respective amounts, in \$ million equivalent, to be financed by IDA. Total costs include contingencies.

SCHEDULE C

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT
CREDIT AND PROJECT SUMMARY

TIMETABLE OF KEY PROJECT PROCESSING EVENTS

(a)	Time Taken to Prepare:	Five Months
(b)	Prepared by:	Government/IDA
(c)	First IDA Mission:	May/June 1989
(d)	Appraisal Mission Departure:	September 22, 1989
(e)	Donors' Meeting:	September 28, 1989
(f)	Negotiations:	October 7-11, 1989
(g)	Planned Date of Effectiveness:	February 28, 1990
(h)	Credit Closing Date:	December 31, 1992
(i)	List of Relevant PCRs and PPARs:	Roads Flood Reconstruction Project, PPAR No. 7311

**STATUS OF BANK GROUP OPERATIONS
IN THE PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN AS OF OCTOBER 31, 1989**

Loan or Credit No.	Fiscal Year	Borrower	Purpose	Amount in US\$ million (less cancellations)		Undis- bursed	Closing Date
				Bank	IDA		
Credits							
20 Credits(s) closed							
					122.73		
C12220-YDR	1982	YEMEN, PEOPLES DEMOCRATIC REP	EDUCATION III		6.00	1.99	06/30/90(R)
C12740-YDR	1982	YEMEN, PEOPLES DEMOCRATIC REP	FISHERIES III		6.00	1.85	06/30/90(R)
C13460-YDR	1983	YEMEN, PEOPLES DEMOCRATIC REP	WADI HADRAMAWT II		9.00	3.50	06/30/90(R)
C13770-YDR	1983	YEMEN, PEOPLES DEMOCRATIC REP	HEALTH DEV. I		7.60	.01	12/31/89(R)
CF0190-YDR	1984	YEMEN, PEOPLES DEMOCRATIC REP	EDUCATION IV		10.40	3.47	12/31/90(R)
C14180-YDR	1984	YEMEN, PEOPLES DEMOCRATIC REP	WATER SUPPLY II		7.00	.92	12/31/89(R)
C15370-YDR	1985	YEMEN, PEOPLES DEMOCRATIC REP	AGRIC. RESEARCH & EX		5.00	2.99	12/31/90
C16170-YDR	1985	YEMEN, PEOPLES DEMOCRATIC REP	HIGHWAYS IV		14.40	8.65	06/30/90
C17390-YDR	1987	YEMEN, PEOPLES DEMOCRATIC REP	GREATER ADEN W. II		5.60	6.28	12/31/93
C18230-YDR	1987	YEMEN, PEOPLES DEMOCRATIC REP	HIGHWAYS V		16.80	11.80	12/31/91
C19440-YDR	1989	YEMEN, PEOPLES DEMOCRATIC REP	AL MUKALLA WATER		12.00	11.10	12/31/95
C19720-YDR	1989	YEMEN, PEOPLES DEMOCRATIC REP	HEALTH II		4.50	4.47	06/30/94
C20450-YDR	1989	YEMEN, PEOPLES DEMOCRATIC REP	HADRAMUT AGR. III		12.00	11.86	06/30/97
TOTAL number Credits = 13					116.30	68.90	
TOTAL** of which repaid					239.03	2.08	
TOTAL held by Bank & IDA Amount sold of which repaid					236.95		
TOTAL undisbursed						68.90	

NOTES:

* Not yet effective

** Not yet signed

*** Total Approved, Repayments, and Outstanding balance represent both active and inactive Loans and Credits.

(R) indicates formally revised Closing Date.

The Net Approved and Bank Repayments are historical value, all others are market value.

The Signing, Effective, and Closing dates are based upon the Loan Department official data and are not taken from the Task Budget file.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT

A. BACKGROUND

The March/April 1989 Rains and Flooding

1. From March 18 to April 3, 1989, five Governorates in PDRY were struck by torrential rains and flash floods. The most severely affected areas were the urban and rural areas in the vicinities of Seiyun, Tarim, Shibam, Al-Qatin and Shihir in the Hadramawt Governorate, the towns of Atag in the Governorate of Shabuwa, and Sayhut in the Al-Mahra Governorate. The amount of daily rainfall in some of the affected areas was recorded at over 180 millimeters (greater than three times the annual average) and had rarely occurred before. The rainfall was followed by high levels of flooding including sheet flooding down wadis. The peak discharge measured in the Wadi Sarr (Hadramawt Governorate) was over 2,000 cubic meters per second. Areas affected to a lesser extent are located in the Governorates of Abyan and Lahej. The flooding from accumulated rains, particularly in the Wadi Hadramawt area, has an estimated probability of recurrence of once every fifty years; in the Abyan and Lahej Governorates the recurrence is once every ten years.

Economic Impact

2. The level of economic activity in 1989 and 1990 will be affected by the loss of agricultural productive capacity and disruption of transport, communications, services and trade. The annual growth rate during 1989 and 1990 is estimated to drop from the previous projection of 4 percent, to about 2 percent. Although rehabilitation and reconstruction works have started, full restoration of facilities to pre-flood conditions will take years. The order of magnitude of external financial contributions received thus far to support the Government's Flood Reconstruction Program is small and further assistance will be required (paras. 17-19).

3. To redress the deterioration of the fiscal and balance of payments situation exacerbated by the floods, the Government has announced a program to reduce the fiscal deficit from 60 percent of GNP in 1988 to about 28 percent of GNP in 1990. This will be brought about by drastic cuts in capital expenditures including the postponement of new development projects and revenue raising measures through increases in import duties and consumption taxes; increased contributions from public sector enterprises are also contemplated. Similarly, the balance of payments deficit (estimated at about \$300 million in 1988 and 1989), will be reduced by restricting imports of non-essential goods, while at the same time, efforts to increase inflows of workers' remittances and grants will be pursued. Until the development of new oil discoveries come on stream, external and domestic financial constraints aggravated by the flood damages will dominate the economic situation.

B. GOVERNMENT RESPONSE AND RECOVERY STRATEGY

4. Emergency relief efforts began almost immediately after the heavy rains and flooding with the assistance of the United Nations Disaster Relief Organization (UNDRO), the United Nations Development Programme (UNDP) and the support of the international community and non-governmental organizations. The provision of food, medicines, blankets and temporary shelter helped to avoid widespread disease, but restoring the affected population to its productive capacity before the floods will require a major reconstruction effort and considerable time.

Government Objectives and Strategy for Recovery

5. The Government's objectives are to reduce human deprivation and suffering through restoration of social services and shelter and restore the country's agricultural productive capacity and essential economic infrastructure destroyed or damaged by the flood. Because the Government faces financial and institutional limitations, emphasis will be placed on the low-income population group and self-help initiatives, particularly in housing rehabilitation.

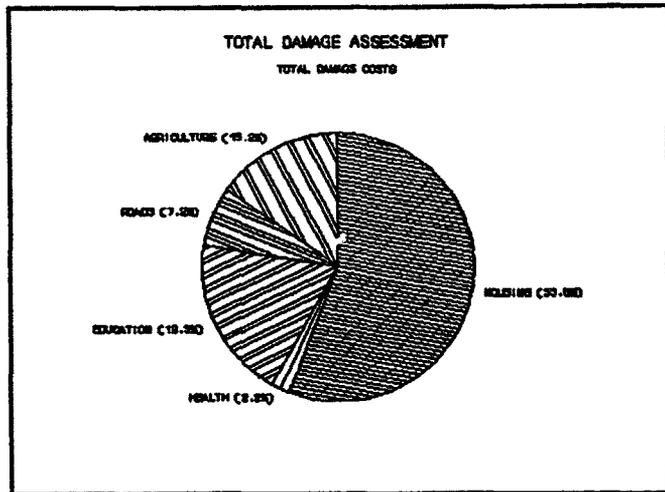
6. The Government's approach to the Flood Reconstruction Program (FRP) has been pragmatic. On March 23, 1989 the Government created a High Committee for Flood Relief Coordination (HCFRC) to coordinate with donors, handle all flood disaster relief activities and oversee general execution of the reconstruction program (paras. 14-16). An assessment of the flood damages was undertaken, and an FRP was designed to concentrate the efforts of both the Government and the international community on restoration of the highest priority items as a means to assist the most seriously affected portion of the population. In preparing specific sectoral programs, the Government has developed simple administrative arrangements and has utilized the existing institutional organizations at the central, governorate and local levels (Annex I). Eligibility criteria and targeting mechanisms aimed at reaching the poorest flood victims have also been developed.

Assessment of Damages

7. The Government, in collaboration with the Food and Agriculture Organization (FAO), the UNDP and IDA, undertook an assessment of overall flood damages. These damages amounted to about YD 55.4 million, or US \$160.7 million equivalent (Table 1). About 40 percent of total damages was in foreign exchange. The damage caused by rains and flooding affected critical infrastructure including housing, social services such as schools and health facilities, irrigation and flood control structures and resulted in losses of personal effects. There was also extensive damage to the country's agricultural productive capacity due to losses of fertile topsoil, livestock and agricultural production. The damage assessment includes the costs of direct damages, but excludes unquantifiable losses, such as the socio-economic impact and disruption to the educational system.

TABLE 1: FLOOD DAMAGE ASSESSMENT**Figure 1**

<u>Sector</u>	<u>Total Damage Costs</u>	
	<u>YD million</u>	<u>US million</u>
Housing	31.0	89.9
Education	10.8	31.3
Agriculture	8.4	24.4
Highways	4.0	11.6
Health	<u>1.2</u>	<u>3.5</u>
Total	<u>55.4</u>	<u>160.7</u>



8. Close to \$90 million in damages or 56 percent of the total flood damages occurred in the housing sector. About 2,000 houses were totally destroyed and another 2,200 houses were partially damaged in the Hadramawt, Shabuwa and Al-Mahra Governorates. The towns of Shihir and Tarim were amongst the most severely affected. About 30,000 people were left homeless and have sought temporary shelter in schools, other public buildings and tents.

9. Education facilities also sustained heavy damages, amounting to about \$31 million. Ten schools (of which six are in the Hadramawt Governorate) with an enrollment of 6,500 students were totally destroyed. About 443 primary and secondary schools were damaged, thus displacing a significant portion of the 160,000 enrolled students. Moreover, many of the schools in flood damaged areas have been occupied by homeless families, which further hampers the educational system.

10. In the agriculture sector, damages to infrastructure are estimated at about \$24 million. The Governorates of Hadramawt, Shabuwa and Abyan were the most severely affected. The loss of wheat, cotton, tobacco and other crops has been estimated at \$6 million (or about six percent of the annual agricultural output), about 5,500 heads of livestock have been lost, and about \$18 million worth of flood protection structures, irrigation works, earthworks, canals, wells, pumps and engines were damaged or destroyed. About 20,000 hectares of arable land, or a third of the annual cultivated land in the country have suffered serious erosion. Rehabilitation works would involve an estimated one million cubic meters of earth moving, 330,000 cubic meters of gabion structures, about 28,000 meters of water piping, about 16,000 cubic meters of concrete, and the repair or replacement of about 350 irrigation pumps.

11. The highways sector, particularly in the Wadi Hadramawt area, sustained damages of about \$12 million. Damage to asphalt roads estimated at about \$7 million was mainly to shoulders, culverts and Irish crossings. About 850

kilometers of tracks (gravel and earth roads) will also require rehabilitation. No damage was sustained to the road network built under IDA projects.

12. The health sector was affected to a lesser extent. Two health centers in Shibam and Maifa'a, and four hospitals located in the towns of Tarim, Shihir, Modia and Nasr, were partially damaged. Ten health units were totally destroyed and twenty others scattered throughout the flood affected Governorates were also partially damaged. In addition, five mobile health units, medicines and medical equipment were swept away by the flood. Damage was not sustained to either health or education facilities constructed under IDA projects.

13. The Seiyun and Al Mukalla airports incurred heavy damages which have been repaired. The telecommunications sector suffered minor damage which has already been repaired, and the heavy rains and floods caused only slight disruptions to the industrial sector. Virtually no damage occurred to the manufacturing sector which contributes less than 10 percent to GDP and consists primarily of the Aden refinery, where about a fifth of the estimated 10,000 workers in the manufacturing sector are employed. Outside the agriculture sector, damage to existing water supply and sewerage facilities was insignificant.

Flood Reconstruction Program (FRP)

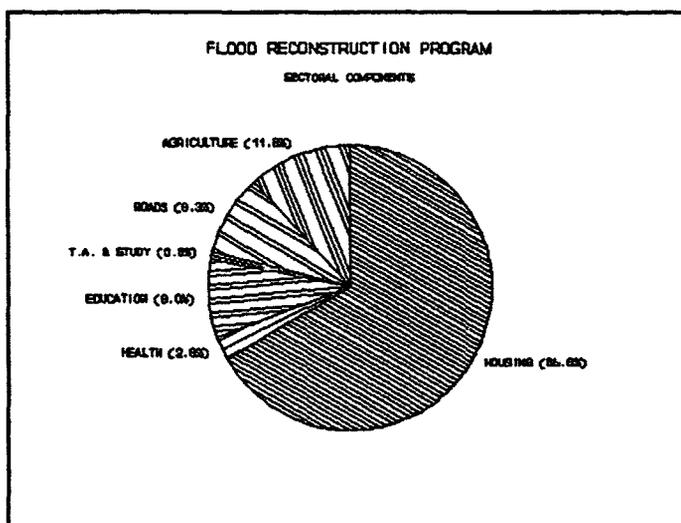
14. In line with the Government's objectives and strategy described above, the FRP has been designed to include the main rehabilitation and reconstruction requirements to be carried out during 1989-94. The most critical elements of the FRP would be implemented during the first three years of the 1989-94 period, and have been taken into account in the scope and content of the proposed Emergency Flood Reconstruction Project (paras. 25 and 26). The estimated cost of the Government's FRP amounts to \$105.3 million and is less in cost than the total damage assessment of \$160.7 million since the latter includes losses to the country's agricultural productive capacity (lost crops and livestock) as well as disruption of transport, communications, services and trade. Table 2 provides a breakdown of costs by sector.

TABLE 2: GOVERNMENT FLOOD RECONSTRUCTION PROGRAM (FRP) ¹
(1989-94)

SECTOR -----	YD Million-----			US \$ Million-----		
	Local	Foreign	Total	Local	Foreign	Total
Housing	12.80	11.07	23.87	37.10	32.08	69.18
Agriculture	0.87	3.37	4.24	2.52	9.77	12.29
Roads	1.19	2.13	3.32	3.45	6.17	9.62
Education	1.80	1.41	3.21	5.22	4.09	9.31
Health	0.38	0.54	0.92	1.10	1.57	2.67
T.A. and Study	<u>0.23</u>	<u>0.54</u>	<u>0.77</u>	<u>0.67</u>	<u>1.57</u>	<u>2.24</u>
<u>FRP Total Cost</u>	<u>17.27</u>	<u>19.06</u>	<u>36.33</u>	<u>50.06</u>	<u>55.25</u>	<u>105.31</u>

Figure 2

15. The FRP provides for the rehabilitation/reconstruction of rain and flood damaged infrastructure and equipment in each of the flood affected sectors throughout the Hadramawt, Shabuwa, Al Mahra, Aden, Abyan and Lahej Governorates. The FRP consists of the following sectoral and technical assistance components:



(i) in the housing sector, the FRP provides for the rehabilitation of about 1,500 damaged houses and the construction of about 1,000 new low-income housing units in the Hadramawt and other affected Governorates;

(ii) in the agriculture sector, the FRP focuses on: (a) the rehabilitation of diversion structures and conveyance and distribution systems for spate irrigation; (b) the rehabilitation of irrigation wells, water storage facilities and pumping stations; (c) the replacement of pumping equipment and destroyed pipes; and (d) the rehabilitation of flood control structures such as wadi bank and wadi training protective structures;

¹Total cost estimates include 10 percent physical contingencies and 4.4 percent for foreign price contingencies for 1989-94; local price contingencies were calculated at 3 percent for 1989-92 and 3.5 percent thereafter.

- (iii) the highways sector program includes: (a) the rehabilitation of all flood-damaged asphalted roads, for which the repair of embankments, shoulders, culverts and Irish crossings is being financed through the reallocation of \$7 million in proceeds from the Fourth and Fifth Highways Projects (Credits 1617-YDR and 1823-YDR (para. 23)); and (b) the rehabilitation of about 850 kilometers of gravel and earth roads;
- (iv) in the education sector, the program consists of the rehabilitation of about 100 damaged schools in the Hadramawt, Abyan and Aden Governorates and the reconstruction of five totally destroyed schools in the Hadramawt and Abyan Governorates. The reallocation of about \$2 million from the proceeds of the Fourth Education Project (SF-19-YDR) would finance repairs to damaged schools in the Hadramawt and Abyan Governorates (para. 23); and
- (v) the health sector program consists of: (a) the rehabilitation of two health centers located in the towns of Shibam and Maifa'a, four hospitals located in the towns of Tarim and Shihir (Hadramawt Governorate) and Modia and Nasr, which are in the Abyan and Lahej Governorates, respectively; (b) the reconstruction of ten health units and the rehabilitation of twenty others that are scattered throughout the flood-affected Governorates; and (c) the replacement of medical equipment and five mobile health units.

16. Technical Assistance and Studies. The FRP includes technical assistance for a study to develop flood emergency preparedness and mitigation programs. The study would evaluate flood hazards in the country and propose measures for flood mitigation control in rural and urban areas, including administrative and legal steps which could be implemented in the short to medium term to reduce the vulnerability of the population at risk. The FRP provides for various consultancy services in such areas as engineering, construction contract management and construction supervision.

Donor Coordination and Aid Requirements

17. The proposed IDA project (US\$ 10 million equivalent) and the reallocation of \$9 million in IDA proceeds from ongoing operations would help meet about 18 percent of the total financial requirements of the Government's Flood Reconstruction Program amounting to \$105 million. To solicit additional support from the international community, a meeting with potential donors was held on September 28, 1989 in Washington, D.C. In addition to a \$1 million grant from UNDP designed to support the proposed project, the Islamic Development Bank is providing \$2 million towards the rehabilitation of damaged schools and health facilities. The Arab Fund has allocated close to \$1 million for rehabilitation of damaged flood control and irrigation structures in some areas of the Wadi Hadramawt. Donors who attended the meeting agreed to assess the prospects for: (i) reallocation of funds under their respective ongoing operations to meet critical reconstruction works; (ii) advancing projects already under preparation which could mitigate the social and economic effects of the flood; and (iii) reviewing the scope of future lending operations to focus on measures for flood mitigation and prevention.

18. Since the torrential rains and flooding, the Government has taken a number of steps to restore economic activity and social services. Emphasis has been placed on providing shelter for the homeless currently living in tents and occupying schools and other public buildings, and providing construction materials to homeowners whose houses were damaged. Through assistance in kind from external donors, the Government is receiving sufficient quantities of construction materials for the rehabilitation of rain and flood damaged houses: more than 6,000 tons of cement have been distributed and another 5,000 tons of cement, 20,000 square meters of glass, 1,500 cubic meters of timber and 500 tons of steel are due to arrive before the end of the year. Under the Government's self-help program for housing repair, these imported construction materials are being distributed to eligible owners whose homes have been damaged. This distribution program is made on a grant basis and is based on household income levels, allowing each eligible beneficiary to receive construction materials with a total value of up to YD 1,500 (\$4,300 equivalent). The Government has also distributed to eligible farmers about 500 pumps received in kind from donors to replace damaged water and irrigation wells. A total of about \$6 million in foreign emergency relief in the form of food, medicine and construction materials received from donors has already been distributed.

19. For the 1989-1994 period, budgetary allocations of about YD 9 million (\$26 million equivalent) have been targeted towards the FRP. This includes about YD 2.5 million (\$7.2 million equivalent) for new housing construction and about YD 1.2 million (\$3.5 million equivalent) for rehabilitation and maintenance of education facilities. So far, the Government has received commitments of an additional \$5 million from external sources. This leaves a financing gap in the Government's FRP of about \$51 million (of which about \$30 million is in foreign exchange) to be financed through further assistance which has yet to be identified (Table 3).

TABLE 3: GOVERNMENT FLOOD RECONSTRUCTION PROGRAM

	<u>Financing Plan</u>			
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	<u>Percent</u>
	-----US \$ Million-----			
Government	26.0	-	26.0	24.7
IDA Reallocations	-	9.0	9.0	8.5
IDA Proposed Project	3.1	6.9	10.0	9.5
UNDP	0.3	0.7	1.0	0.9
Islamic Development Bank	-	2.0	2.0	1.9
Arab Fund	-	1.0	1.0	0.9
Other Donors	-	5.0	5.0	4.8
Unidentified	20.7	30.6	51.3	48.8
	<u>50.1</u>	<u>55.2</u>	<u>105.3</u>	<u>100.0</u>

C. IDA RESPONSE AND STRATEGY

20. IDA's strategy has been to: (i) assist the Government in carrying out a flood damage assessment immediately following the rains and flooding; (ii) assist in developing a five-year FRP and in mobilizing financial assistance from the international community to support the Government's FRP; (iii) reallocate proceeds from ongoing IDA projects to support the Government's reconstruction efforts; and (iv) provide financial assistance through the proposed project for the most critical components of the FRP.

21. In early May 1989, the Government requested an IDA mission to assist in assessing the extent of damage in key sectors and in developing a FRP which could be supported by the donor community. At the request of the Government, an IDA identification/preappraisal mission visited PDRY in May/June 1989 and prepared a report on damage assessment. A draft FRP was handed to the Government on June 3, 1989. At that time, the Government's preference was to contact potential donors on a bilateral basis to solicit support for emergency flood reconstruction works. Due to limited donor response, in August 1989 the Government requested IDA to co-host a meeting with potential donors (para. 17).

22. The proposed project aims at supporting the Government's objectives to restore vital physical and social infrastructure, strengthen the country's institutional capacity to manage disaster recovery programs, and develop programs to mitigate the country's vulnerability to future floods. It has been designed to finance a self-contained portion of the most critical physical and technical assistance requirements of a two and one half year time slice of the Government's five year FRP.

23. To support the Government's immediate reconstruction efforts, three ongoing IDA credits have been amended. The Credit Agreements of the Fourth and Fifth Highways Projects (Credits 1617-YDR and 1823-YDR) avail about \$7 million in credit proceeds, resulting from cost savings, for the repair of flood damaged asphalt roads. About \$2 million of the proceeds from the Fourth Education Project (SF-19-YDR) have been reallocated for the rehabilitation of schools which sustained rain and flood damages. The content of IDA's country assistance program for PDRY will be modified to accommodate a possible irrigation flood reconstruction and mitigation project and a first rural roads project aimed at rendering such roads less prone to damage from heavy rainfall and flooding. The proposed Tarim Water Supply Project which was recently appraised, would include the provision of water supply to flood affected areas. Sector work planned on operation and maintenance of municipal infrastructure would also review and make recommendations on flood drainage, protection and preparedness in urban areas.

Previous IDA-Financed Disaster Reconstruction Project

24. In March 1982, severe rains and flash flooding caused, *inter alia*, major damage to key sections of the highway network and to bridges located in the Abyan and Aden Governorates. In order to assist the Government in its reconstruction effort, an IDA credit of SDR 6.3 million (US\$7 million equivalent) was approved in October 1982 for a Roads Flood Reconstruction

Project (Credit 1295-YDR). The Project Performance Audit Report No. 7311 dated June 24, 1988 noted that the project objectives were met despite initial delays in establishing the construction unit under the project. The main lesson learned was to ensure that adequate institutional arrangements for project implementation are in place at the outset. This has been taken into account in the design of the proposed project.

D. DETAILED PROJECT DESCRIPTION

Emergency Flood Reconstruction Project Description

25. The proposed project would finance a time slice of the Government's FRP and would consist of:

- (i) the reconstruction of totally destroyed housing, including off site infrastructure;
- (ii) the rehabilitation and equipping of damaged schools;
- (iii) the rehabilitation of damaged flood control and irrigation structures such as flood bunds, weirs, and wadi embankments;
- (iv) the rehabilitation of damaged health centers, hospitals and health units, and the replacement of medical equipment; and
- (v) technical assistance for: (a) a flood emergency preparedness and mitigation study. The study aims at recommending administrative and engineering measures and introducing policies for disaster preparedness and prevention; and (b) the provision of technical experts to assist the ERU and the technical ministries in such areas as contract management, construction supervision and monitoring of project execution.

Selection Criteria

26. Structures which have been damaged or destroyed by the March/April 1989 rains and flooding would be eligible for IDA financing under the proposed project provided that such rehabilitation and reconstruction works: (i) can be implemented within a two and a half year period; (ii) benefit the greatest number of homeless inhabitants in the cities and areas that were the most severely affected by the rains and flooding; (iii) are critical to restoring health and education services; (iv) are essential to restoring flood control structures and agricultural production; and (v) are vital for mitigation or prevention of future flood damages. Building sites located in flood prone areas or encroaching on agricultural land have been declared unsuitable for construction by the Government. Inter-sectoral priorities have been ranked in order of importance as follows: housing, education, health and agriculture. Specific eligibility criteria for sectoral components, and eligibility criteria for beneficiaries of new housing units to be financed under the project have been agreed upon with the Government (Annex II).

Project Cost and Financing

27. The total cost of the proposed project amounts to \$15.4 million including contingencies. The proposed project has been exempted from customs duties and taxes. Details of project costs and the financing plan are provided in Schedule A. The UNDP is providing \$1.0 million equivalent, on a grant basis, to support the ERU and implementing ministries through the provision of consultants who would assist in project execution. The Government will contribute \$4.4 million equivalent for local cost financing. The proposed IDA credit of US\$ 10 million would finance about 65 percent of total project costs or about 91 percent of the foreign exchange requirement and 40 percent of the local cost component. Local cost financing by IDA is justified given the emergency nature of the project and the extra budgetary requirements generated by the rains and flooding. Annex III provides a breakdown of project components by cost category.

D. INSTITUTIONAL ARRANGEMENTS AND PROJECT IMPLEMENTATION

Implementation of the Government's FRP and the Proposed Project

28. The High Committee for Flood Relief Coordination, established on March 23, 1989, has overall responsibility for implementation of the FRP. The HCFRC members meet regularly on a monthly basis and represent the housing, education, health, agriculture and highways sectors. Day-to-day coordination and monitoring of implementation of the FRP and of the proposed Emergency Flood Reconstruction Project will be the responsibility of a national, multi-sectoral and temporary Emergency Reconstruction Unit (ERU) under the jurisdiction of the Ministry of Planning. The ERU will report to the Deputy Minister of Planning, who is a member of the HCFRC and therefore has direct access to the Deputy Prime Minister and Chairman of the HCFRC. The ERU will be chaired by a National Reconstruction Coordinator who has been appointed by the Deputy Prime Minister, and will consist of Sector Coordinators who have already been nominated for each sector involved in the FRP. The ERU will be supported by technical advisers (engineers, architects etc.) who will assist in financial and physical project monitoring and reporting.

29. The ERU's main functions are to: (i) coordinate the implementation of the FRP and the proposed project; (ii) assist in overcoming implementation bottlenecks; (iii) alert the Minister of Planning and/or the office of the Prime Minister to major obstacles impeding the timely implementation of the project; (iv) monitor overall progress of the project and prepare monthly briefings and quarterly progress reports for the Government and donor community; (v) liaise with IDA and other donors supporting the FRP; and (vi) maintain project records and coordinate all submissions of withdrawal applications, statements of expenditure and audit reports under the project. The terms of reference of the ERU and its staffing requirements have been agreed with the Government. The Government has also agreed to hold annual implementation and investment reviews with IDA to review project execution, availability of financing and the proposed

investment program for the following year. Details of implementation arrangements for each of the sectoral components are described in paras. 30 to 33. The Implementation Schedule and Monitoring Criteria agreed with the Government are attached as Annexes IV and V, respectively.

Sectoral Organization

30. The relevant government ministries would be responsible for the implementation of sectoral components being financed under the proposed project. The Sector Coordinators would meet with the National Reconstruction Coordinator to review monthly progress and coordinate multi-sectoral actions (para. 28).

31. Housing Sector. The Ministry of Construction and Housing (MCH) will be responsible for the construction of low-cost housing developments which will be implemented by local civil works' contractors (para. 41). Through the existing local institutional organization described in para. 34, the Government has collected and verified data on housing damages and identified beneficiaries for the self-help housing and new housing construction programs. Agreement has been reached with the Government on the beneficiary eligibility criteria for the allocation of newly constructed houses to be financed under the proposed project (Annex II). The Directorate of Housing under the MCH will be responsible for the allocation of new low-cost housing units and for the administration of the Government's cost recovery program (para. 47).

32. Health and Education Sectors. The Ministry of Health (MOH) and the Ministry of Education (MOE) would be responsible for the rehabilitation of health and education facilities which will be implemented by local civil works' contractors (para. 41). Procurement of medical and educational equipment (including vehicles) will also be under the direct responsibility of these ministries. IDA has had a long standing and a good working relationship with the MOH and MOE, and implementation procedures being followed under ongoing IDA credits for health and education would also be applied under the proposed project.

33. Agriculture Sector. Execution of flood control rehabilitation activities to be implemented under the project would be the responsibility of the Directorate of Irrigation (DOI) under the Ministry of Agriculture and Agrarian Reform (MAAR), which would undertake these works by force account. DOI would procure directly the necessary construction materials and equipment to carry out such works. Under the Ministry of Planning's overall supervision and with the assistance of consultants, the DOI would also play a significant role in carrying out the flood emergency preparedness and mitigation study.

Institutional Organization

34. A detailed organizational chart of various agencies involved in the reconstruction effort is provided in Annex I. The Government has utilized the Local Development Councils, an existing organizational structure at the local level, to assess and monitor the reconstruction efforts. In the housing sector, Block Committees, District Flood Relief Committees (DFRC) and Governorate Flood Relief Committees (GFRC) have been formed in each community which sustained flood damages. The Block Committees have been responsible for collecting

information on damaged and destroyed houses. Standardized reporting forms were used to collect basic information on the inhabitants and the extent and cost estimates of damage. This data has been verified by the Block Committees, and the DFRCs have made recommendations to the GFRCs on the level of assistance needed per family. This information is also being used by the Government to implement its self-help housing repair and cost recovery programs and to establish priority guidelines for reconstruction assistance to affected inhabitants (paras. 18 and 47). The MOH and MOE formed inter-ministerial committees consisting of representatives of different departments and sectors, to assess the damages to each school and health facility and to establish preliminary cost estimates of rehabilitation and reconstruction activities. The technical assessment of the type and nature of flood damages sustained to buildings in the housing and health sectors was completed in September 1989. The technical assessment of damages to education facilities for components to be financed under the proposed project was also finalized in September 1989. The complete technical assessment of all remaining damaged education facilities will be carried out with UNDP technical assistance and is scheduled for completion during the first half of 1990.

35. The Governorate offices of the MAAR played an important role in collecting information on flood damages and identifying the most severely affected rural communities and farmers. With assistance from the FAO, the DOI of the MAAR prepared an evaluation report of the flood damage and rehabilitation needs in the agriculture and irrigation sectors. Subsequently, DOI prioritized a list of project proposals for rehabilitation of flood damages to irrigation and wadi bank protection works, and suggested emergency and long-term measures for flood protection and control. The DOI prepared technical proposals which either recommended the rehabilitation of structures to their pre-flood standard or the improvement of their structural and hydraulic designs to enhance the level of flood protection.

Status of Project Preparation²

36. Site Selection and Acquisition. Sites for reconstruction in the housing, health and education sectors have been identified. The process of site selection and acquisition began in June 1989 and is consistent with the agreed selection criteria. The Government has confirmed that it owns the land for all new building sites. Moreover, sites located in flood prone areas or encroaching on agricultural land have been declared unsuitable for housing and public building reconstruction and rehabilitation. In the agriculture sector, specific details of priority locations and required flood control and irrigation works for emergency rehabilitation in the affected Governorates of Hadramawt, Shabuwa, Al Mahra, and Lahej have been prepared by the DOI and reviewed and found acceptable by IDA.

37. Building and Structural Designs. The MCH has developed a prototype design for an expandable, two-room low-cost housing unit, which was reviewed and found acceptable by IDA. Existing school designs and drawings prepared under

² Annex VI provides a list of selected documents and data available in the Project File.

ongoing IDA education projects will be utilized under the proposed project. For newly acquired sites, draft site development plans have been designed taking into account topographical surveys, orientation, exposures, utilities connections etc., and have been reviewed and found acceptable by IDA. The technical survey prepared for damaged public buildings will serve for the rehabilitation of schools and health institutions in accordance with the established scope of works, technical recommendations and detailed construction drawings. The original designs will be used to rehabilitate damaged flood control schemes. The FAO has outlined the manpower requirements needed to carry out the studies for those structures in the agriculture/flood control sector which require upgraded designs. Since physical implementation of such works is not expected to commence before 1992, they have been excluded from the proposed project.

38. Tender Documents. Preliminary drawings and bid documents for civil works' construction of houses, health and education facilities have been prepared and include complete sets of required plans, technical specifications, bills of quantity, special and general conditions, bid, performance bond, and contract forms. Tender documents for flood control rehabilitation works have also been prepared by DOI. During appraisal IDA reviewed such documents and found them satisfactory.

39. Local Construction Methods, Materials and Costs. Local construction methods will be applied to the extent feasible using available local materials. However, basic construction materials such as steel reinforcement bars, gabions, cement, lumber, electrical and sanitary fittings and fixtures, hardware and glass panes will be imported. For new housing construction, the stone load bearing walls method will be used in regions and areas where stones are abundantly available. Alternatively, the cement block and reinforced concrete tie beam method will be used for the construction of new low-cost houses. The unit cost of construction and costs of materials and labor have been reviewed by IDA and found acceptable. Local stone and imported gabion baskets would be utilized for flood control repairs. Earth moving works will be undertaken to repair bunds and embankments for wadi training.

40. Custom Duties and Taxes. All imported construction materials and equipment under the project are exempted from custom duties and taxes, and will be directly imported by contractors and technical ministries.

Procurement

41. The procurement methods are summarized in Schedule B. All goods to be financed under the project would be procured in accordance with Bank guidelines for international competitive bidding (ICB) except for: (i) goods, including vehicles, estimated to cost not more than \$50,000 equivalent per contract, and not more than \$200,000 equivalent in the aggregate, which may be procured under contracts through international shopping on the basis of evaluation and comparison of price quotations obtained from at least three suppliers; and (ii) vehicles and equipment for the health and education sector components which may be procured through the United Nations Children's Fund (UNICEF). Civil works would be procured under contracts awarded on the basis Local Competitive Bidding (LCB) procedures, which have been reviewed and found acceptable by IDA. Due to

the size and dispersal of the proposed civil works, local competitive bidding open to foreign companies represented in PDRY is considered adequate. Since local manufacturing industries for construction material are virtually non-existent in PDRY, civil works' contractors are expected to import almost all required construction materials. All procurement documentation of ICB and LCB for contracts of \$50,000 or more will be subject to IDA's prior review and approval. Consultants to be financed under the proposed project would be selected in accordance with Bank guidelines.

Disbursement

42. The proposed project would finance:

- (i) 100 percent of the foreign exchange cost of imported materials, equipment and vehicles;
- (ii) 100 percent of the cost of consultant services; and
- (iii) 70 percent of the total cost of civil works' contracts.

43. Full documentation would be sent to IDA in support of withdrawal applications in respect of goods and vehicles, and civil works' contracts, except for small civil works' contracts of less than \$50,000 equivalent which would be reimbursed against Statements of Expenditures (SOE) for which related documentation would be retained for review by IDA supervision missions. It is expected that physical implementation of the proposed project will be completed within two and a half years. To allow for payment of contract retention monies, a six month period has been provided. Hence, the closing date of the credit would be December 31, 1992.

44. Special Account. To ensure the uninterrupted flow of funds for approved project activities, a Special Account would be opened at the National Bank of Yemen to which IDA will make an initial deposit of US\$ 1.0 million which is expected to finance IDA's share of eligible expenditures over a period of four months. The Special Account will be denominated in US dollars and replenished on the basis of standard documentation for eligible reimbursable expenditures.

45. Retroactive Financing. In view of the emergency import needs and the strained foreign exchange cash flow position of the country, the proposed credit would include retroactive financing of up to six percent of the credit amount for expenditures (for critical construction and goods required for reconstruction and rehabilitation works) incurred after October 31, 1989.

Accounting and Auditing

46. Each sectoral implementing agency responsible for the day-to-day administration of their project components would maintain separate records and accounts of all project activities and expenditures incurred in conformity with normal accounting practices. Each Ministry involved in the proposed project would prepare an annual report summarizing the financial situation of all project operations, which would then be submitted to the ERU for its review and subsequent submission to IDA. Agreement has been reached during negotiations

that annual financial statements for the project would be submitted to IDA not less than six months after the end of the fiscal year. Annual audits, performed by independent auditors acceptable to IDA, for each sectoral implementing agency, including audits of Statements of Expenditures and the Special Account, would be submitted by the ERU to IDA not later than nine months after the end of each fiscal year.

Cost Recovery and Government Financial Assistance

47. The Government's existing cost recovery policy, administered by the Directorate of Housing under the MCH, would be applied to beneficiaries of new low-cost houses constructed under the proposed project: beneficiaries are required to pay at least 15 percent of their monthly income as monthly installments until the full cost of the house has been recovered.

Environmental Impact

48. The reconstruction of urgently needed housing, the rehabilitation of damaged health and education facilities in addition to priority highways and irrigation works, would have a positive impact on the environment. The project will include a flood preparedness study aimed at identifying nationwide preventive measures which could be taken into account to mitigate future losses resulting from similar disasters. Houses, health units and schools that have been totally or partially destroyed will be reconstructed in sites that are out of the flood zones and do not encroach on agricultural land. Site selection shall also take into account environmental aspects and provision has been made to provide safe water supply and on-site sewage disposal facilities. Finally, there are no historical monuments that would be affected by the proposed emergency works.

Benefits and Risks

49. The activities to be financed by the proposed project would reduce economic losses and human suffering, help to normalize the education system and restore health services. The project will also help to revitalize agricultural activity. Emphasis on low income groups is appropriate since they have little savings or protection to meet basic needs. To the extent feasible, labor-intensive methods will be used, which are estimated to generate about 5,000 new jobs in the construction sector for low income families. The proposed flood preparedness and mitigation study will help to establish measures to reduce the impact of such disasters over the medium to long term.

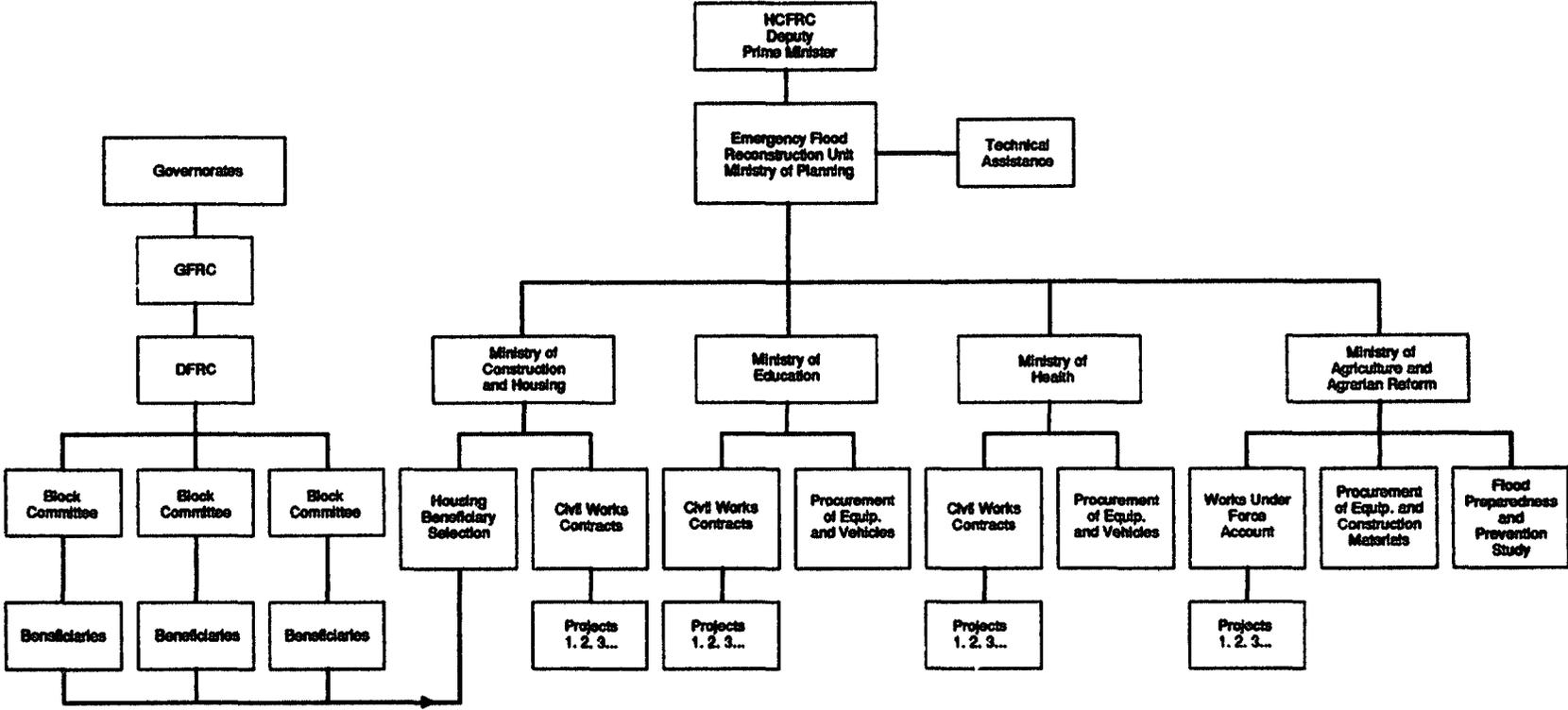
50. The main risk associated with the project relates to potential project implementation delays due to the limited institutional and financial absorptive capacity of Government agencies. To reduce such a risk, the proposed project will provide technical assistance to strengthen the technical and managerial capacity of the ERU and to sector implementing agencies in the areas of engineering, contract management and contract supervision. Moreover, through the Deputy Minister of Planning, the National Reconstruction Coordinator who heads the ERU will have access to the Deputy Prime Minister (and Chairman of the HCFRC), which should help to overcome potential bottlenecks. In addition, IDA supervision will average twenty staff weeks (or twice as much as the normal

staffing of IDA supervision) during the first two years of project implementation. An annual implementation and investment review of the project, carried out jointly by the Government and IDA, will also help to reduce potential delays in project implementation. This will also afford the opportunity to review the financing prospects for the FRP in forthcoming years, since the secured financing sources for the FRP are, at present, insufficient to cover its total financial requirements (para.19).

Agreed Actions

51. The Government has agreed on the following actions: (i) the terms of reference and staffing of the ERU; (ii) the implementation arrangements with each sectoral agency; (iii) the eligibility guidelines for beneficiaries of new low-cost housing units, and that all rehabilitation and reconstruction works to be financed under the project would meet the agreed selection criteria; (iv) design standards for low-cost housing units; (v) beneficiaries of new low-cost housing units will pay to the Borrower the equivalent of at least 15 percent of the monthly family income until the total cost of such housing unit is paid in full; (vi) an annual review of project implementation and the presentation of a financial plan for the next year's investment program; and (vii) completion of a flood emergency preparedness and mitigation study by January 1, 1992. As conditions of effectiveness, the Government would: (i) establish the ERU with adequate staffing and facilities, for which a National Reconstruction Coordinator to head the ERU and the Sectoral Coordinators who represent the Government agencies involved in project implementation have already been appointed; and (ii) confirm execution of the UNDP grant agreement between the Government and UNDP.

**PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT
Organization Chart**



PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
FLOOD EMERGENCY RECONSTRUCTION PROJECT

ELIGIBILITY CRITERIA FOR REHABILITATION WORKS AND
BENEFICIARIES OF THE HOUSING PROGRAM

GENERAL

1. The general eligibility criteria for the selection of works to be financed under the Project are as follows:

- (i) physical implementation of the works should be carried out by June 30, 1992;
- (ii) housing program benefits should accrue to the greatest number of homeless inhabitants in the cities and areas which were the most severely affected by the rains and flooding;
- (iii) works should address the critical restoring needs of health and education services; and
- (iv) in the agricultural sector, works should restore irrigation/flood protection structures to ensure food security for the next crop season.

2. Inter-sectoral priorities are ranked, in order to importance, as follows: housing, education, health and agriculture.

SECTORAL SPECIFIC CRITERIA

A. HOUSING SECTOR

Allocation of New Housing Units to Eligible Beneficiaries

1. An "eligible beneficiary" for a new housing unit should meet the following criteria:

- a. the Borrower (Block Committees, District Flood Relief Committees (DFRC) and Governorate Flood Relief Committees (GFRC) in the Executive Offices of each Governorate) certify that homeowner's/tenant's houses had been substantially destroyed or rendered uninhabitable due to their location in flood prone areas;
- b. the homeowner/tenant had occupied a housing unit prior to the date of the rains and flooding; and
- c. the homeowner/tenant owns or rents no other house.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
FLOOD EMERGENCY RECONSTRUCTION PROJECTELIGIBILITY CRITERIA FOR REHABILITATION WORKS AND
BENEFICIARIES OF THE HOUSING PROGRAM

2. New houses would be allocated on the following priority basis:
 - a. first priority for the homeless staying in schools or other public buildings;
 - b. second priority for the homeless staying tents; and
 - c. third priority for the homeless staying with relatives or other families.

3. Within each of the above groupings, priority will be given to households with the greater number of children under 16 and the lower average annual income, taking into account the proximity of the new housing unit to the previously destroyed house.

Design Standards and Costs for New Housing Units

4. Works to be financed under the project for new housing construction should meet the following criteria:
 - a. the site is located out of flood prone areas and is in close proximity to basic offsite infrastructure networks (such as water, drainage, electricity and transport); and
 - b. construction works for the entire development (including land acquisition and the provision of and connection to basic infrastructure) should be completed by June 30, 1992.

Cost Recovery for New Housing Units

5. In line with the Council of Ministers' Decree Number 159 of 1983 concerning the calculation of the cost of housing and monthly installments, the Borrower shall charge the Beneficiary of a new housing unit an amount equivalent to at least 15 percent of the monthly household income. The collection of these charges will continue until the full cost of construction of the housing unit is recovered by the Borrower.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
FLOOD EMERGENCY RECONSTRUCTION PROJECTELIGIBILITY CRITERIA FOR REHABILITATION WORKS AND
BENEFICIARIES OF THE HOUSING PROGRAMMonitoring Requirements

6. The Governorate Executive Offices will maintain adequate records on the selection of beneficiaries for new housing carried out under the Project described in paragraphs A.1, A.2 and A.3.

7. The Directorate of Housing in each Governorate shall maintain records on the terms and conditions and repayments of charges for housing provided under the Council of Ministers' Decree Number 159 of 1983 (para. A.5).

8. The HCFRC shall be provided a status report on the actions required under paragraphs A.6 and A.7 above.

B. EDUCATION SECTOR

The order of priority for selection of works for financing under the Project would be as set forth below and would focus on rehabilitation works benefitting the greatest number of students:

1. rehabilitation of damaged schools where students are attending classes in unsafe and unsuitable public buildings or tents; and
2. rehabilitation of damaged schools where double shift classes are being held.

C. AGRICULTURE SECTOR

The eligibility criteria to be applied to works in the agriculture sector would focus on rehabilitation of communal flood control and irrigation structures in the Hadramawt, Shabuwa and Abyan Provinces, with a view to benefitting communities or groups of farmers. The works to be selected, which should meet the following criteria, would:

1. benefit a minimum of 300 hectares of crops, including about 200 hectares of food crops;
2. cost less than YD 2,000 per beneficiary family;
3. be located where rain and flood damage is such that there is a high risk of continued flooding from future rains;
4. be located where at least 20 families are at risk due to damage or inadequate flood protection;

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
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ELIGIBILITY CRITERIA FOR REHABILITATION WORKS AND
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5. be located where there is a demonstrable need to construct/rebuild flood bunds to ensure the safety of villages or towns; and
6. be located where there is a demonstrable need for wadi protection to prevent soil erosion and further losses.

D. HEALTH SECTOR

The principle objective is to reinstate health sector services to the previous and acceptable level of standard prior to the rains and flooding. In line with this objective, the selection criteria for rehabilitation of investments are:

1. the provision of health services to all the population at risk within the coverage of the existing facilities;
2. the rehabilitation of damaged hospitals and health centers to restore routine and emergency services; and
3. the replacement of damaged and lost medical equipment and ambulances to enable delivery of essential health services.

**PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT**

Estimated Project Costs by Category

	Local	Foreign	Total	Local	Foreign	Total
	-----YD Million-----			-----US\$ Million-----		
REHABILITATION #####						
CIVIL WORKS -----						
Health Sector	0.21	0.16	0.36	0.58	0.47	1.05
Education Sector	0.28	0.23	0.51	0.82	0.67	1.49
Agriculture/Flood Control Sector	0.24	0.01	0.25	0.70	0.03	0.73
Subtotal	0.73	0.40	1.13	2.10	1.17	3.27
EQUIPMENT -----	0.04	0.41	0.46	0.13	1.20	1.33
TOTAL REHABILITATION	0.77	0.82	1.59	2.23	2.37	4.60
NEW CONSTRUCTION #####						
New houses (civil works, including equipment & construction materials)	1.34	1.10	2.44	3.89	3.18	7.07
TECHNICAL ASSISTANCE #####						
UNDP Technical Assistance	0.11	0.20	0.31	0.31	0.57	0.88
Flood Preparedness Study	0.10	0.15	0.25	0.29	0.43	0.72
Subtotal	0.21	0.35	0.56	0.60	1.00	1.60
TOTAL BASE COST	2.32	2.26	4.58	6.72	6.95	13.27
CONTINGENCIES -----						
Physical Price	0.23	0.23	0.46	0.67	0.66	1.33
	0.13	0.13	0.26	0.38	0.39	0.76
Subtotal	0.36	0.36	0.72	1.05	1.04	2.09
TOTAL PROJECT COST	2.68	2.62	5.30	7.77	7.99	15.36

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT

Implementation Schedule
Target Dates

<u>RESPONSIBLE AGENCY</u>	<u>KEY ACTIONS</u>	<u>DATES</u>
I. GENERAL		
GOVT/IDA	Donors' Meeting	09/28/89
IDA	Appraisal Completion	10/05/89
GOVT/IDA	Credit Negotiations Completion	10/11/89
MOP/GOVT	Establishment of ERU	10/89
MOP	Appointment: National Coordinator	10/89
MCH/MOE/		
MAAR/MOH	Appointment: Sectoral Coordinators	11/89
MCH/MOE/MOH	Retroactive Financing	11/01/89
IDA	Board Presentation	12/89
GOVT/IDA	Credit Signing	12/89
GOVT/UNDP	Ratification of UNDP Grant	12/89
UNDP	Selection of TA Consultant	01/90
GOVT/IDA	Credit Effectiveness	02/90
II. MAIN WORKS, PROVISION OF CONSTRUCTION MATERIALS AND EQUIPMENT		
<u>MINISTRY OF HOUSING AND CONSTRUCTION (MCH)</u>		
	Final Detailed Design	12/89
	Final Site Planning	12/89
	Preparation of Bid Documents (Contracts 1 to 3)	12/89
<u>Civil Works' Contract 1</u>		
	Invitation for Bids	02/90
	Bid Evaluation	04/90
	Contract Award	05/90
<u>Civil Works' Contract 2</u>		
	Invitation for Bids	03/90
	Bid Evaluation	05/90
	Contract Award	06/90
<u>Civil Works' Contract 3</u>		
	Invitation for Bids	04/90
	Bid Evaluation	06/90
	Contract Award	07/90

MINISTRY OF AGRICULTURE AND AGRIARIAN REFORM (MAAR)

	<u>DATES</u>
Procurement of Materials and Equipment	
Preparation of Bid Documents	11/89
Invitation for Bids	02/01/90
Bid Opening	03/15/90
Bid Evaluation	03/20/90
Contract Award	05/15/90
Supply of Goods	08/15/90
Works' Commencement (Force Account)	09/01/90

MINISTRY OF EDUCATION (MOE)

Procurement of Equipment and Vehicles	
Preparation of Technical Specifications	12/89
Procurement through UNICEF	01/90
Supply of Equipment and Materials	04/90
Rehabilitation Contract	
Preparation of Bid Documents	11/89
Invitation for Bids	02/90
Bid Evaluation	04/90
Contract Award	05/90

MINISTRY OF HEALTH

Procurement of Equipment and Vehicles	
Preparation of Technical Specifications	01/90
Procurement through UNICEF	02/90
Supply of Equipment and Materials	05/90
Rehabilitation Contract 1	
Preparation of Bid Documents	11/89
Invitation for Bids	01/90
Bid Evaluation	03/90
Contract Award	04/90
Rehabilitation Contract 2	
Preparation of Bid Documents	02/90
Invitation for Bids	05/90
Bid Evaluation	07/90
Contract Award	08/90
Rehabilitation Contract 3	
Preparation of Bid Documents	05/90
Invitation for Bids	08/90
Bid Evaluation	10/90
Contract Award	11/90

III. FLOOD PREPAREDNESS AND MITIGATION STUDY

MINISTRY OF PLANNING (MOP) AND DIRECTORATE OF IRRIGATION (DOI)

Flood Preparedness and Mitigation Study	<u>DATES</u>
Invitation of Consultants	01/90
Opening of Proposals	03/90
Bid Evaluation	04/90
Contract Award	06/90
Inception Report	10/90
Draft Report	09/91
Final Report	01/92

ANNEX VPEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECTMONITORING CRITERIANEW HOUSING CONSTRUCTION

	<u>Measurement</u>
SITE 1: Earthmoving	m3
Compacted Area	m2
Number of Housing Units:	
-- Under Construction	number
-- Completed	number
SITE 2: Earthmoving	m3
Compacted Area	m3
Number of Housing Units:	
-- Under Construction	number
-- Completed	number
SITE 3: Earthmoving	m3
Compacted Area	m2
Number of Housing Units:	
-- Under Construction	number
-- Completed	number

EDUCATION SECTOR

School 1 Rehabilitation	% completed
School 2 Rehabilitation	% completed
School 3 Rehabilitation	% completed
School 4 Rehabilitation	% completed
School 5 Rehabilitation	% completed

HEALTH SECTOR

Rehabilitation of Hospitals	number completed and % completion of each
Rehabilitation of Health Centers	number completed and % completion of each
Rehabilitation of Health Units	number completed and % completion of each

AGRICULTURE

SITE 1: Earthmoving	m3
Gabion Construction	m3
SITE 2: Earthmoving	m3
Gabion Construction	m3

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT

SELECTED DOCUMENTS AND DATA AVAILABLE IN THE PROJECT FILE

A. GENERAL REPORTS AND STUDIES

A1 Report entitled "Evaluation of March/April 1989 Flood Damage and Rehabilitation Needs", dated June 1989, prepared by the Food and Agriculture Organisation.

A2 Draft UNDP Project Document for a Reconstruction and Rehabilitation of Flood Damage Project (PDY/89/A/13/31).

A3 Inter-ministerial Decree No. 159 of November 29, 1989 concerning the determination of housing costs and owner repayment terms.

A4 Law No. 20 of 1976 concerning the conveyance of houses; and standard forms relating to housing contractual arrangements.

A5 Resolution No. 1 dated March 23, 1989 establishing the High Committee for Relief Coordination and its terms of reference.

A6 Inter-ministerial Decree No. 81 concerning the Government's flood damage rehabilitation program.

A7 Statistical data on the Flood Damage Assessment.

A8 Status Report dated October 8, 1989 on ongoing and planned rehabilitation and reconstruction efforts supported by external donors and budgetary allocations.

B. GENERAL STUDIES AND TERMS OF REFERENCE RELATED TO THE PROJECT

B1 Terms of Reference for the Flood Preparedness and Mitigation Study.

B2 Terms of Reference for the Emergency Reconstruction Unit and its staffing requirements.

C. SELECTED WORKING PAPERS PREPARED BY IDA STAFF

C1 Agriculture/Flood Control Sector: detailed cost estimates and working papers on proposed rehabilitation components.

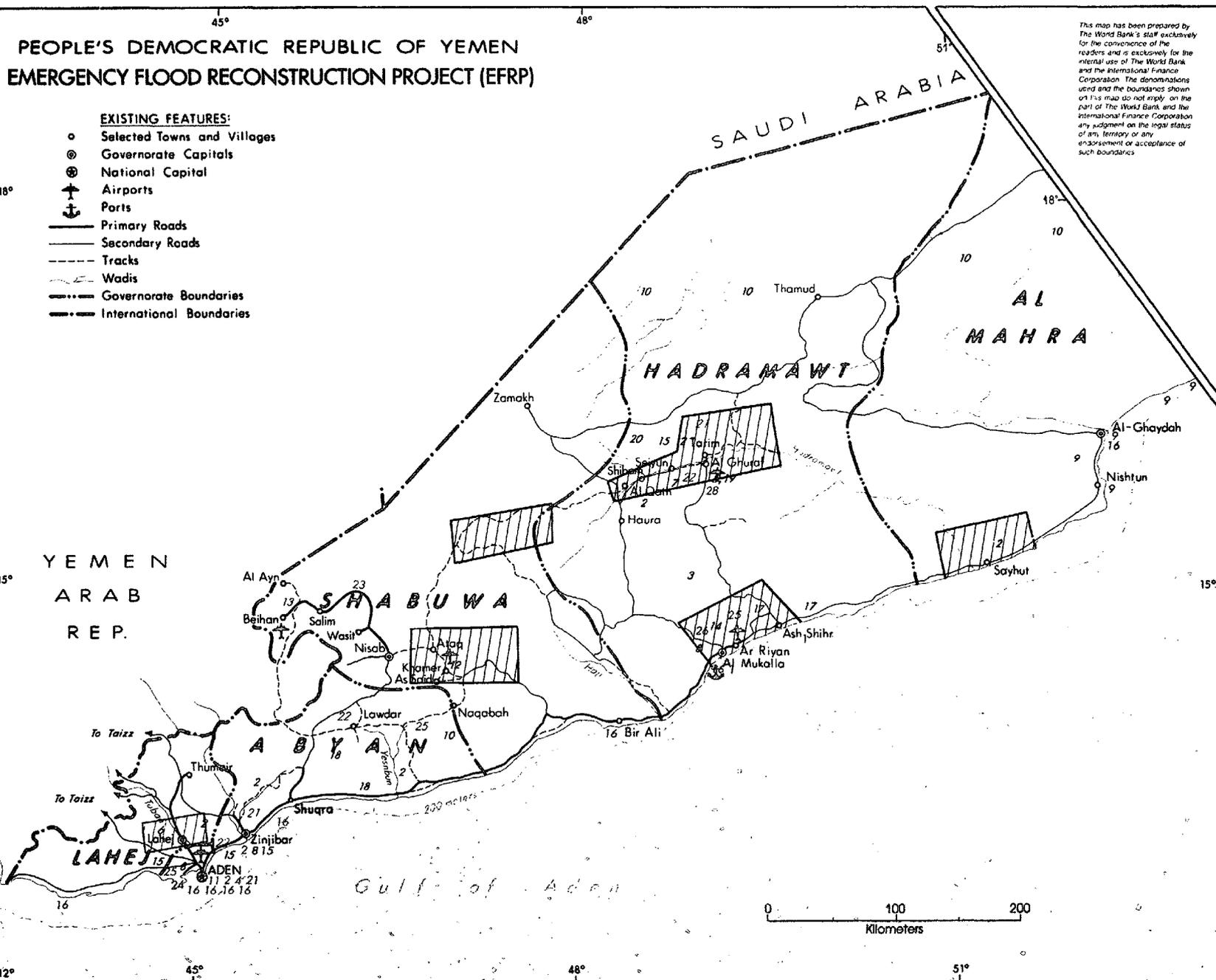
C2 Health and Education Sectors: detailed cost estimates and working papers on proposed rehabilitation components.

C3 Housing Sector: detailed engineering designs for low-cost housing units, bills of quantity, cost estimates, draft tender documents and working papers on proposed housing reconstruction program; and a random sample of completed and certified housing damage assessment forms.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN
EMERGENCY FLOOD RECONSTRUCTION PROJECT (EFRP)

EXISTING FEATURES:

- Selected Towns and Villages
- ⊙ Governorate Capitals
- ⊕ National Capital
- ✈ Airports
- ⚓ Ports
- Primary Roads
- Secondary Roads
- - - Tracks
- ~ Wadis
- - - Governorate Boundaries
- - - International Boundaries



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IDA Assisted Projects

PROJECT:	FISCAL YEAR APPROVED
* HIGHWAYS I	1971
1 FISHERIES I	1973
2 EDUCATION I	1975
3 HIGHWAYS II	1975
4 ADEN PORT REHABILITATION	1976
5 WADI HADRAMAWT AGRIC. I	1976
6 WADI TUBAN AGRICULTURE	1978
7 WADI HADRAMAWT POWER	1978
* WATER SUPPLY ENGINEERING & TECHNICAL ASSISTANCE	1978
8 EDUCATION II	1979
9 FISHERIES II	1979
10 PETROLEUM DEVELOPMENT ASSISTANCE	1980
11 ADEN WATER SUPPLY	1980
12 HIGHWAYS III	1981
13 WADI BEIHAN AGRICULTURE	1981
14 AL MUKALLA WATER SUPPLY	1981
15 EDUCATION III	1982
16 FISHERIES III	1982
17 POWER II	1982
18 ROADS FLOOD RECONSTRUCTION	1983
19 WADI HADRAMAWT AGRIC. II	1983
* HEALTH DEVELOPMENT	1983
20 SEIYUN WATER SUPPLY	1984
21 EDUCATION IV	1984
22 AGRICULTURAL RESEARCH AND EXTENSION	1985
23 HIGHWAY IV	1985
24 ADEN WATER SUPPLY II	1987
25 HIGHWAY V	1987
26 ALMUKAU WATER SUPPLY	1988
* HEALTH II	1988
28 WADI HADRAMAWT AGRIC. II	1989

* Projects spread over several or numerous locations.

 Major Flood Affected Area: