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MEMORANDUM AND RECOMMENDATION
OF THE
PRESIDENT OF THE
INTERNATIONAL DEVELOPMENT ASSOCIATION
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED CREDIT
OF SDR 23.9 MILLION
TO THE
REPUBLIC OF YEMEN
FOR AN
EDUCATION SECTOR INVESTMENT PROJECT

FEBRUARY 01, 1994

MICROGRAPHICS

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Report No: P- 6192 YEM
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CURRENCY EQUIVALENTS

Currency Unit = Yemeni Rial (YR)
Official Exchange Rate: US\$1 = YR 12
Market Rate (October 1993): US\$1 = YR 48

ABBREVIATIONS

ETS	-	Education and Training System
IDA	-	International Development Association
MIS	-	Management Information System
MOE	-	Ministry of Education
PCP	-	Planned Change Program
PDMA	-	Project Development and Monitoring Agency
PDU	-	Project Development Unit
PIU	-	Project Implementation Unit
SPD	-	Subproject Director
TA	-	Technical Assistance

Fiscal Year
January 1 - December 31

**REPUBLIC OF YEMEN
EDUCATION SECTOR INVESTMENT PROJECT**

CREDIT AND PROJECT SUMMARY

Borrower: Government of the Republic of Yemen

Beneficiary: Ministry of Education

Amount: SDR 23.9 million (US\$ 33.0 million equivalent)

Terms: Standard IDA, 40 Years Maturity

Financing Plan:

Financier	US \$ million		
	Local	Foreign	Total
IDA	7.6	25.4	33.0
OPEC	2.0	6.0	8.0
Government	8.7	0.0	8.7
Total	18.3	31.4	49.7

Economic Rate of Return: Not Applicable

Staff Appraisal Report No. 12461-YEM dated February 01, 1994

Map: IBRD 25261

MEMORANDUM AND RECOMMENDATION OF THE PRESIDENT
OF THE INTERNATIONAL DEVELOPMENT ASSOCIATION
TO THE EXECUTIVE DIRECTORS
ON A PROPOSED CREDIT TO THE REPUBLIC OF YEMEN
FOR AN EDUCATION SECTOR INVESTMENT PROJECT

1. I submit for your approval the following memorandum and recommendation on a proposed development credit to the Republic of Yemen for SDR 23.9 million (US\$ 33.0 million equivalent) to help finance an education sector investment project. The credit would be extended on standard IDA terms with a maturity of 40 years.
2. **Country/Sector Background.** Three years after the unification of Yemen in May 1990, a democratically elected government was formed. The major challenges facing the new Government are to revive the economy, which has suffered severely in the aftermath of the Gulf Crisis, and to satisfy the basic needs of a rapidly growing population. Soon to be launched policy adjustments are expected to provide the basis for a resumption of economic growth in the mid and late 1990s. This would lead to an increase of demand for trained manpower in a variety of categories. To meet this demand and support possible productivity gains in agriculture, industry and services, a sustained effort is needed to upgrade the quality of Yemen's labor force.
3. Over the past two decades, Yemen's education and training system (ETS) has grown phenomenally. Enrollments expanded from some 250,000 students in 1970/71 to over 2.5 million in 1991/92, with basic education (Grades 1-6) accounting for 1.9 million; secondary education (Grades 7-12) 563,000; teacher training 26,000; vocational and technical training 13,000; and higher education 52,000. In addition, some 70,000 people participate in nonformal literacy and vocational training courses. The rapid build-up of the ETS and the high share of government expenditures allocated to the sector (20 percent) clearly illustrate the priority given to human resources development in Yemen.
4. Impressive as these achievements are, the past emphasis on quantitative expansion has created imbalances and qualitative deficiencies in the system. At all levels of education, female enrollment rates are considerably less than those for males. There are also significant regional disparities in access to educational facilities. Educational achievements are often unsatisfactory. A large number of boys and girls leave basic education without attaining functional literacy. Graduates from other educational streams are frequently ill prepared for the jobs available in labor markets.
5. A major cause of quality deficiencies is the shortage of well-qualified teachers, a problem exacerbated by the Government's decision in 1991 to replace expatriate teachers, often with untrained high school graduates. Additionally, curricula are inadequate and teaching materials are in short supply. There is little emphasis on problem solving in science teaching in general education, and instruction programs in technical and vocational schools are not up to date. The existing system of student evaluation is outmoded and unreliable. Physical facilities are often in poor condition. Classrooms are overcrowded, furniture is lacking or damaged, laboratories and libraries frequently non-existent. There is little maintenance of buildings, causing them to deteriorate quickly and creating health hazards for students and teachers. Addressing these problems effectively will require improvements in the management and planning of educational facilities and programs, including strengthened capacities for policy analysis, research, monitoring, and evaluation. There is also a need for improved supervision of schools and better management within schools.

6. These issues were identified in a recent IDA study on human resource development in Yemen¹, which was discussed with the Government in February 1992. Based on the study's findings and recommendations, the Government, with IDA assistance, has put in place the first² of a possible series of projects to strengthen basic education, with emphasis on quality improvement and access for girls. Two completed and two ongoing projects would generate adequate capacity to train teachers for the primary and secondary levels. The proposed project has been under preparation since November, 1992. It would form an integral part of a longer-term sector investment program focusing on quality improvement in and increased female access to secondary education, and would strengthen training of middle-level manpower for which demand is already strong and likely to increase in the coming years. A Planned Change Program (PCP) addressing current issues in secondary and post-secondary education would form the basis of the project.

7. **Project Objectives.** The proposed Education Sector Project would enhance Yemen's capacity for human resource development in order to meet the emerging needs of the economy and is consistent with the Government's education sector objectives, i.e. (i) enhancement of secondary students' learning achievements, with special emphasis on science and mathematics education and the quality of teaching; (ii) improvement in girls' access to secondary education; and (iii) establishment of labor market oriented two-year post-secondary programs covering business, commerce and industrial subjects.

8. **Project Description.** The proposed project would achieve the above stated objectives through national and school-based subprojects in the eight Change Areas which constitute the PCP: (i) improvement in the learning environment through reduction of overcrowding through provision of classrooms, provision of equipment especially for science subjects, and establishment of a maintenance program (total cost US \$11.0 m); (ii) improvement in teacher performance through development and provision of training modules, summer schools for teachers and school-based training programs (US \$0.5 m); (iii) strengthening of institutional capacity for and development of curricula (US \$1.1 m); (iv) improvement of school management through development and provision of school management training and materials and establishment of an educational Management Information System (MIS) (US \$1.6 m); (v) development of learning resources (US \$2.7 m); (vi) strengthening of institutional capacity for the development of evaluation processes to improve the reliability, comparability and validity of examinations (US \$1.0 m); (vii) increasing female access to secondary education in underserved areas (US \$4.9 m); and (viii) establishment of a nationwide labor-market oriented Community College system (US \$14.8 m). Twenty-six subprojects in these eight areas have been prepared, of which 25 have been appraised jointly by IDA staff, Ministry of Education (MOE) staff and designated Intermediary Agency staff. The proposed credit would cover civil works, equipment, furniture, materials, library books, local costs for seminars, workshops, printing of manuals, and technical assistance for all aspects of implementation, including the Intermediary.

9. **Participatory Preparation.** From identification (August 1992) through pre-appraisal, the proposed project has evolved with the participation of Yemeni teachers, professionals, officials from the

1/ "Republic of Yemen, Human Development: Societal Needs and Human Capital Response," June 23, 1992, Population and Human Resources Division, Country Department II, Middle East and North Africa Region.

2/ Republic of Yemen, Basic Education Project (Credit 2412), approved in FY93.

MOE, and private sector representatives. The scope of the program was conceptualized by the Yemenis through three workshops during the identification mission in which IDA played a catalytic role. The program was subsequently validated by a Headmasters workshop and by senior MOE officials including the Minister and Deputy Ministers. Yemeni working groups, including one expatriate consultant, were established for each Change Area to develop subprojects. The project's scope, Change Areas and prepared subprojects were reconfirmed by the newly elected Government and presented to IDA during the pre-appraisal mission in August, 1993. This approach, involving the active participation of over 200 Yemeni teachers, administrators and professionals, has resulted in a high degree of commitment and ownership of the PCP.

10. **Project Implementation.** The Project Development and Monitoring Agency (PDMA), the Intermediary, would be the key institution for planning, implementing and managing the PCP. Headed by a Higher Council chaired by the Minister of Education, the PDMA is built around the well functioning and experienced Project Implementation Unit (PIU) and includes one new unit, the Project Development Unit (PDU). The PIU will handle all procurement, accounts, TA and supervision while the PDU will be responsible for appraisal, monitoring and evaluation of subprojects and the PCP as a whole. An operating manual for the PDMA including responsibilities and functions of units has been prepared and agreed during appraisal. The Higher Council will have an Executive Secretary, who was appointed in October 1993, and whose key responsibility would be to coordinate the work of the two units. In addition to the present PIU staff, the PDMA will include only six new professional staff.

11. Subproject Directors (SPD) would be directly responsible for implementation of subprojects in each Change Area. A Policy Board to be chaired by a Deputy Minister or eminent professional with experience in the relevant educational subsector, who would be appointed by the Minister of Education, would be established for each Change Area, and would include nominees of Policy Boards from interrelated Change Areas. These Boards would ensure congruence of subproject activities and outcomes with MOE policy and would provide a direct avenue for coordinating activities of interrelated subprojects. Each SPD would have access to an Experts Group with a national membership which would serve as a resource for advice on technical issues related to subproject activities.

12. **Project Sustainability.** The project, when completed, would add YR135 million to the recurrent costs of MOE, which represents 1.3 percent of MOE's 1992 recurrent expenditure. The availability of funds therefore does not threaten project sustainability. Institution building processes in the different Change Areas such as curriculum development, evaluation, teacher performance and the community college system would have continued benefits through the internalization and adoption of innovative practices by various subsectors in MOE. Lastly, the high degree of ownership and commitment generated by the participatory approach adopted for project preparation would also be a key contributing factor to project sustainability.

13. **Lessons Learned from Previous IDA Involvement.** The proposed project is the next logical step in IDA's relatively long experience with Yemen's ETS. Through 14 projects since 1973 (10 completed and 2 closing in FY94), IDA has invested about US \$150 million in the sector. These projects are contributing to the development of ETS in Yemen, and have addressed priority needs in teacher training, technical education and vocational training, engineering education, nonformal education, and development of research capability in the MOE. Implementation delays beginning in 1989 slowed disbursements; however, the Government's reaction to IDA supervision and country implementation review initiatives has resulted in marked improvements in the pace of both implementation and disbursements over the past two years (disbursements increased from US \$4 million in FY91 to US \$8

million in FY92 and US \$12 million in FY93). Lessons learned from completed and ongoing projects and considered in the design of the proposed project include the following: (i) project design must be flexible enough to allow for changes in priorities due to unification; (ii) cofinancing must be firmed up prior to credit effectiveness; and (iii) prior commitment of the Government must be obtained for appropriate levels of technical assistance.

14. **Rationale for IDA Involvement.** Given Yemen's rapid population growth, poor social indicators, and modest women's participation, the country assistance strategy has identified human resource development as a priority. Historically, about 20% of IDA lending has been directed to this sector with a significant increase in recent years. IDA's sector strategy places priority on improving quality and learning achievements in grades 1-12, particularly for girls; expansion of technical education with the participation of business and industry in planning; and, fostering labor market relevant post secondary education. This project's emphasis on quality improvement in secondary education complements the previous Basic Education Project.

15. While the Government is strongly committed to the project, it will need substantial outside support to implement the program. The Government has requested IDA assistance for the project, to be supplemented by cofinancing from other donors. IDA support for the project would be justified for the following reasons: (i) IDA's past involvement in the sector; (ii) the Association's catalytic role in preparing the project; and (iii) the PCP is a long-term initiative which covers a wide range of issues and activities. No other donor would have the depth of experience and financial resources necessary to support such a reform program.

16. **Agreements Reached.** Agreements have been reached with the Government on: (i) a sector development policy statement, including reform objectives, action programs, performance indicators and targets, delivery dates, and continued commitment to the PCP during the life of the project; (ii) establishment of the Intermediary (PDMA) and finalization of the management structure for Change Areas and subprojects; (iii) inclusion in the MOE budget of a line item for quality improvement; (iv) financing of local costs at the market exchange rate through disbursement against contracts denominated in US dollars; and (v) procurement of technical assistance through twinning arrangements. For Community Colleges, agreement has been reached on: (i) establishment and structure of the governance system; (ii) upgrading of existing secondary technical schools in Sana'a and Aden to serve as Community Colleges; and (iii) cost recovery mechanisms.

17. **Environmental Assessment.** The project is classified as "C" for environmental assessment. Components that enhance environmental benefits would include environmental education coverage in secondary science education programs, a key focus of the project.

18. **Program Objective Categories.** As explained below (para. 18), the proposed project would contribute to: (i) poverty alleviation through labor market oriented education and training programs; and (ii) bringing women into the mainstream of economic and social activity.

19. **Benefits.** The project would provide an improved learning environment to, and contribute to enhanced achievement for, a student population estimated to rise from 563,000 in 1992 to approximately 1 million in 2000 in secondary education (grades 7-12). Improvements in the *quality of secondary education* would result from: (i) enhancing the ability of MOE to plan, implement and manage change through the PDMA and various other agencies by internalizing innovative processes, and through establishment of an MIS; (ii) sustained curriculum, evaluation, and learning resources development and

renewal processes especially in science education, including environmental education; (iii) dissemination of improved teaching techniques to replace the current focus on memory-based learning; (iv) increased female access to secondary education, especially in underserved areas, through provision of school places for 5,000 girls, incentive programs to recruit female headmasters and specialized home based learning programs for girls; (v) development of capable school leadership through provision of headmasters' training; and (vi) active community participation in schools through school-based subprojects. Establishment of a *National Community College System* would benefit some 3,000 students per year and help to replace expatriate workers in middle level positions with Yemenis through the provision of employment related training which has been designed, and would be continually monitored and revised, with the active involvement of private sector employers in order to ensure continuing labor market relevance.

20. **Risks.** There are three main risks to be addressed: First, the new unit of the Intermediary agency (PDMA), the Project Development Unit, is inexperienced. This risk will be mitigated through the provision of technical assistance which will provide PDMA with advice from a similar institution, and by the core role played in the PDMA by the experienced and efficient PIU. Second, because many of the subprojects are interrelated, delays in implementation of a subproject could result in bottlenecks in others. This risk will be mitigated through representation of interrelated subprojects on common Change Area Policy Boards and through careful training provided to PDMA staff in monitoring subproject implementation. Third, bureaucratic systems in Yemen may not easily adjust to private sector participation in the Community College system. This risk has been minimized through agreement on the composition of the National Community College Council, the governing body of the system, which includes a majority private sector participation.

21. **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 it.

Lewis T. Preston
President

Attachments

Washington, D.C.
Date: February 01, 1994

**REPUBLIC OF YEMEN
EDUCATION SECTOR INVESTMENT PROJECT**

SCHEDULE A

Estimated Project Costs (US \$ million):

Components	Local	Foreign	Total
I. Secondary Education	5.2	12.8	17.9
I. Females Participation	2.0	2.9	4.9
II. School Based Subprojects	0.2	0.6	0.8
III. Community Colleges	7.5	7.3	14.8
IV. Project Monitoring & Management	0.1	0.3	0.5
V. Future Subprojects	0.7	3.3	4.1
Total Base Cost	15.7	27.4	43.0
Physical Contingencies	1.6	2.7	4.3
Price Contingencies	1.1	1.3	2.4
Total Project Cost	18.3	31.4	49.7

Financing Plan (US \$ million):

Financier	Local	Foreign	Total
IDA	7.6	25.4	33.0
OPEC Fund	2.0	6.0	8.0
Government	8.7	0.0	8.7
Total	18.3	31.4	49.7

Estimated Disbursements (US\$ million):

Fiscal Year	1995	1996	1997	1998	1999	2000	2001	2002
Annual	1.0	2.3	6.6	11.6	4.9	3.3	1.7	1.6
Cumulative	1.0	3.3	9.9	21.5	26.4	29.7	31.4	33.0
Percentage	0	10	30	65	80	90	95	100

Note: Figures may not add up due to rounding

REPUBLIC OF YEMEN
EDUCATION SECTOR INVESTMENT PROJECT

SCHEDULE B

PROCUREMENT METHODS AND DISBURSEMENTS (US\$ million)

Category of Expenditure	ICB	LCB	Other	NBF ^a	N/A	Total
<u>Building Facilities</u>						
Constructions/Rehabilitation	6.7 (4.0)	10.0 (4.0)				16.7 ^b (8.0)
Architectural and Engineering Fees			0.6 ^c (0.3)			0.6 (0.3)
<u>Furniture, Equipment, Software</u>						
Furniture	2.3 (1.6)	0.6 (0.5)				2.9 (2.1)
Equipment	13.5 (9.4)		3.4 ^c (2.9)			16.8 ^b (12.4)
Books, Manuals, Training Materials & Software			1.7 ^d (1.2)			1.7 (1.2)
<u>Technical Assistance</u>						
			11.0 ^e (8.8)			11.0 (8.8)
Total Financing Requirements	22.4 (15.0)	10.6 (4.5)	16.6 (13.3)	0.0 0.0	0.0 0.0	49.7 (32.9)

Notes: Figures in brackets are the respective amounts financed by the IDA Credit.
Figures may not add up due to rounding.

- a. Non-IDA financed categories
- b. Procurement in accordance with the Guidelines for the Use of Consultants by World Bank borrowers and by the World Bank as Executing Agency (August 1981)
- c. US\$ 0.4 million in local shopping, US\$ 3.0 million in international shopping.
- d. Direct contracting through copyright owners.
- e. of which US\$2.4 million would be financed by the OPEC fund.
- f. of which US\$5.6 million would be financed by the OPEC fund.

SCHEDULE B

DISBURSEMENT SCHEDULE (US \$million)

Category	Credit Allocation	Percentage to be financed
1. Civil Works		
a. Construction and Rehabilitation	7.2	83% of contracts
b. Architectural and Engineering Fees	0.4	
2. Furniture, Equipment, Training, Materials and Software	14.2	100% of foreign expenditures and 90% of local expenditures
3. Technical Assistance (Fellowship, Consultants & Seminars)	8.3	100% of foreign expenditures and 90% of local expenditures
4. Unallocated	2.9	
Total	33.0	

Note: Figures may not add up due to rounding

**REPUBLIC OF YEMEN
EDUCATION SECTOR INVESTMENT PROJECT**

SCHEDULE C

Timetable of Key Processing Events

- (a) **Time taken to Prepare Project:** 14 months
- (b) **Project Prepared by:** Borrower, with IDA assistance
- (c) **First IDA Mission:** July 13, 1992
- (d) **Appraisal Mission Departure:** October 1, 1993
- (e) **Date of Negotiations:** December 20-22, 1993
- (f) **Planned Date of Effectiveness:** October 1994
- (g) **Relevant PCRs:** Education III, Cr. 915-YAR
Education IV, Cr. 1203-YAR
- (h) **Responsibilities for Preparation:**

Task Manager:	Yogendra Saran (MN2PH)
Peer Reviewers:	Sverrir Sigurdsson (ESP) Adriaan Verspoor (ESP)
Division Chief (Acting):	Alfred T. Heron (MN2PH)
Director:	Ram K. Chopra (MN2)
Regional Vice President:	Caio Koch-Weser (MNA)

REPUBLIC OF YEMEN
EDUCATION SECTOR INVESTMENT PROJECT

SCHEDULE D
Page 1 of 2

A. Statement of IDA Credits (As of September 30, 1993)

Credit No.	Fiscal year	Borrower	Project	Amount in US\$million (less cancellations)		Closing Date
				IDA	Undisbursed	
68 Credits closed				523.57		
CR0100-YEM	1984	REPUBLIC OF YEMEN	EDUCATION IV	10.40	.23	12/31/92
C15340-YEM	1985	REPUBLIC OF YEMEN	TECH.ASSIST. TO MPD	4.70	3.56	09/30/93
C16170-YEM	1985	REPUBLIC OF YEMEN	HIGHWAYS IV	14.40	1.05	06/30/93
C16490-YEM	1986	REPUBLIC OF YEMEN	TECHNICAL TRAINING	12.70	11.09	12/31/93
C16670-YEM	1986	REPUBLIC OF YEMEN	TIHAMA V	10.00	9.84	12/31/93
C17010-YEM	1986	REPUBLIC OF YEMEN	POWER IV	11.70	4.27	06/30/93
C17020-YEM	1986	REPUBLIC OF YEMEN	T.A. PETROLEUM	10.87	2.64	12/31/93
C17300-YEM	1987	REPUBLIC OF YEMEN	GREATER ADEN W. II	5.60	2.00	12/31/93
C17720-YEM	1987	REPUBLIC OF YEMEN	SRADP	12.30	6.21	06/30/94
C17730-YEM	1987	REPUBLIC OF YEMEN	TEACHER TRAINING	10.40	6.14	09/31/94
C18220-YEM	1987	REPUBLIC OF YEMEN	HIGHWAYS V	16.80	11.06	12/31/93
C18400-YEM	1988	REPUBLIC OF YEMEN	SANAA-HODEIDAH RD. R	10.67	4.17	12/31/93
C18860-YEM	1988	REPUBLIC OF YEMEN	AGRIC.DEV (NORTHER R	17.60	9.10	12/31/95
C19440-YEM	1989	REPUBLIC OF YEMEN	AL MUKALLA WATER	12.00	10.03	12/31/95
C19720-YEM	1989	REPUBLIC OF YEMEN	HEALTH II	4.50	2.92	06/30/94
C19830-YEM	1989	REPUBLIC OF YEMEN	EASTERN REG.	15.00	13.59	12/31/96
C20130-YEM	1989	REPUBLIC OF YEMEN	INST. DEV. FOR PUB.	10.80	10.20	06/30/96
C20430-YEM	1989	REPUBLIC OF YEMEN	HADRAMUT AGR.III	12.00	12.80	06/30/97
C20730-YEM	1990	REPUBLIC OF YEMEN	EMERGENCY FLOOD RECO	9.24	2.38	12/31/93
C21510-YEM	1990	REPUBLIC OF YEMEN	HEALTH II	15.00	15.09	12/31/96
C21600-YEM	1990	REPUBLIC OF YEMEN	TAIZ FLOOD DISASTER	15.00	8.10	12/31/98
C21640-YEM	1990	REPUBLIC OF YEMEN	POWER III	15.50	16.43	12/31/96
C21700-YEM	1990	REPUBLIC OF YEMEN	TARIM WATER SUPPLY	12.00	12.45	12/31/97
C21770-YEM	1991	REPUBLIC OF YEMEN	MULTI-MODE TRANSPORT	30.00	26.10	06/30/97
C22220-YEM	1991	REPUBLIC OF YEMEN	SECONDARY TEACHER TR	19.40	18.27	12/31/98
C22580-YEM	1991	REPUBLIC OF YEMEN	EMERGENCY RECOVERY C	33.00	21.51	09/30/94
C22630-YEM	1991	REPUBLIC OF YEMEN	FISHERIES IV	13.20	12.83	06/30/99
C22900-YEM	1992	REPUBLIC OF YEMEN	NAT.AGRIC.SECT.MGMT	14.40	14.33	12/31/99
C23730-YEM	1992	REPUBLIC OF YEMEN	LAND & WATER CONSERV	32.80	33.81	06/30/99
C24120-YEM	1993	REPUBLIC OF YEMEN	BASIC EDUCATION	19.70	20.50	12/31/98
C25250-YEM	1993	REPUBLIC OF YEMEN	FAMILY HEALTH	26.60	26.57	09/30/2000
Total number of Credits - 31				458.28	349.50	
	Total of which repaid			981.85	22.46	
	Total held by Bank and IDA Amount sold Of which repaid			959.40		
	Total undisbursed				349.50	

