

| | | Board Approval (FY) | | 97 | |
|------------------|--|--------------------------|-----------|--------|--|
| L/C Number: (| C2913; CP513 | Boord Approval | | 97 | |
| e F S | (95%), Irrigation and drainage (2%), General education sector (1%), Power (1%), Other social services (1%) | (US\$M) | | | |
| | Board: WS - Water supply | Cofinancing | 0 | 0 | |
| Country: | Yemen | Loan/Credit (US\$M) | 10.2 | 8.5 | |
| Project Name : 7 | Taiz Water Supply Pilot | Project Costs (US\$M) | 11.1 | 9.3 | |
| PROJ ID: | P043367 | | Appraisal | Actual | |
| 1. Project Data: | Date Posted : 08/15/2002 | | | | |

2. Project Objectives and Components

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a. Objectives

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The main objective of the project was to help the Government to start implementation of its water strategy for Taiz. Specific objectives of the project were to:

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- mitigate the immediate water shortage in Taiz (by increasing the supply by about 100%);
- identify new water sources to avert a sustained water shortage (to meet the needs of at least the year 2000 or about 550 liters per second);
- develop and test a process and institutional framework for decentralized water resources management (through establishment of local community associations); and
- promote private sector participation in the management of water and wastewater utility services (by entering into a management contract in the second phase of the Taiz Water Supply Project).

b. Components

The project consisted of three components:

- (i) well drilling and conveyance to the city of Taiz (appraisal US\$3.7 million, actual US\$5.34);
- (ii) Compensation package for people in Habir area who will give up water to Taiz, consisting of rural water supply schemes that include a pilot program of activities targeted at women, two demonstration engineering schemes, school rooms, and studies for aquifer dike in Habir area (appraisal US\$2.0 million, actual US\$2.58); and
- (iii) Technical assistance and studies, including preparation of a management contract for the National Water and Sanitation Authority (NWSA) Taiz branch (appraisal US\$4.2 million, actual 1.38)).

c. Comments on Project Cost, Financing and Dates

The actual total project cost at closing was US\$9.3 million compared to the appraisal estimate of US\$11.1 million. The final amount of IDA credit was US\$8.5 million and US\$ 1.5 million was canceled. The project closed eighteen months behind schedule.

3. Achievement of Relevant Objectives:

The objectives of the project were not achieved.

• The project did not mitigate the immediate water shortage in Taiz nor did it succeed in bringing additional water to Taiz to meet the water needs for year 2000. The construction of wells and pipeline is expected to increase water supply in Taiz by 60 l/s, substantially lower than the SAR target of 173 l/s. Moreover, there is a water quality problem at well 6 which makes water unfit for consumption. If the water quality problem is not resolved, incremental water supply will be further reduced to 40 l/s.

- The project introduced a participatory approach for rural water supply and small irrigation infrastructure. However, it was unsuccessful in developing an institutional framework for decentralized water resources management and water transfer from rural to urban use.
- The project was unsuccessful in promoting private sector participation (PSP) in the management of water and wastewater utility services. A study to assess PSP options was concluded under the project, but it did not adequately address the issue. The ongoing "Water Supply and Sanitation Project" aims at introducing PSP in selected cities in Yemen. Taiz is included but the timing and form of PSP has not been decided.
- 4. Significant Outcomes/Impacts:
- The project introduced community participation in rural water and irrigation sectors. Beneficiaries have formed water user associations and eight out twelve rural water schemes have been handed over to communities. Nine irrigation associations have been created to maintain the infrastructure.
- The project achieved an economic rate of return of 20%.
- The rural water supply sub-component exceeded the appraisal targets.
- 5. Significant Shortcomings (including non-compliance with safeguard policies):
- Poor quality at entry (i) combination of pilot and emergency approaches; (ii) implementing agencies and communities were not sufficiently consulted/involved during preparation and implementation; (iii) feasibility studies were inadequate. The critical importance of water rights was overlooked and the social and environmental risks were significantly underestimated (the project should have been classified as a environment category A;and (iv) more attention should have been given to demand management given the high unaccounted for water (50%+ in Taiz).
- Project suffered from poor implementation due to following reasons (i) social tensions in the project area over water rights and water transfer to Taiz; (ii) delays in counterpart funding; (iii) poor contractor performance; (iv) delays in construction of East Habir pipeline due to opposition by local communities; (v) lack of clarity regarding compensation.
- Government ownership of the project was low. The Steering Committee proved largely ineffective during implementation, as it met only twice during the entire implementation period. More importantly, the government (independently of the project) provided new water supplies to meet the emergency needs, thus lessening the project's relevance.

| 6. Ratings: | ICR | OED Review | Reason for Disagreement /Comments |
|----------------------|----------------|----------------|---|
| Outcome: | Unsatisfactory | Unsatisfactory | |
| Institutional Dev .: | Negligible | Negligible | |
| Sustainability : | Unlikely | Unlikely | |
| Bank Performance : | Satisfactory | Unsatisfactory | Highly unsatisfactory quality at entry During supervision, the Bank undertook measures to mitigate the shortcomings of the original project design. However, satisfactory supervision could not overcome the severity of the problems due to poor project design. Therefore, overall Bank Performance is rated unsatisfactory. |
| Borrower Perf .: | Satisfactory | Unsatisfactory | Although the Minister of Electricity and Water and the Governor of Taiz made some valuable interventions, borrower performance overall is evaluated as unsatisfactory for the following reasons: Poor preparation and unsatisfactory quality at entry. Delays in counterpart funding. Lack of coordination between the |

| | | three implementing agencies. This resulted in implementation delays. Also, the unwillingness of the National Water Resource Authority to cooperate with the Bank's social team caused delays. Lack of clarity regarding compensation. This resulted in opposition of the construction of East Habir pipeline by local communities and substantial delays in construction. Dismantling of Southern Uplands Regional Development Unit after substantial training was provided to the staff under the project. |
|------------------|--------------|---|
| Quality of ICR : | Satisfactory | |

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

Several important lessons are identified:

- It is important to formally revise project development objectives to reflect new circumstances.
- Piloting new approaches with emergency measures is likely to lead to problems.
- There is a need for up-front social/institutional analysis that: (a) identifies water rights both formal and informal; (b) identifies other users and their rights and relation to the water rights holders; (c) analyses the existing organizational and institutional structure; (d) conducts a "sociopolitical" assessment of the dynamic and the scope for change; and (e) allows adequate time for the water rights and transformation to be facilitated.
- It is important to build local support for the project from the beginning and to regularly update community leaders and beneficiaries of project performance.

8. Assessment Recommended? Yes No

Why? Rural-urban water transfer will be come increasingly common as urban demand increase. An assessment of this project will not only provide lessons for Yemen but for many other countries as well.

9. Comments on Quality of ICR:

The quality of the ICR is satisfactory. It is frank and adequately discusses the reasons for the failure of the project to achieve its objectives. It is not clear from the ICR whether the Bank complied with its policy for providing compensation.