

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: AB1716

Project Name	Yemen Rainfed Agriculture and Livestock: Rural Poverty Alleviation
Region	MIDDLE EAST AND NORTH AFRICA
Sector	Crops (30%);Animal production (30%);Agricultural extension and research (20%);Agricultural marketing and trade (20%)
Project ID	P089259
Borrower(s)	GOVERNMENT OF YEMEN
Implementing Agencies	Ministry of Agriculture and Irrigation Social Fund for Development Sana'a Republic of Yemen Sana'a Yemen, Republic of Tel: 967-1-282445 Fax: 967-1-289509
Environment Category	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
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1. Country and Sector Background

Poverty. With 42% of the people living in poverty, Yemen is among the poorest country in the world. It is also essentially a rural country, with 77% of the population living in rural areas. Poverty is largely a rural phenomenon: almost half of the population living in rural areas is classified as poor; 83 % of the poor live in rural areas.¹ They derive a large share of their income from agriculture or agriculture-related activities.

Agriculture and broad-based growth. During the period 1996-2001, economic growth was driven mostly by agriculture² which grew at 5.4% a year, and contributed to GDP growth more than its relative share. Agriculture exports represent approximately a third of the non-oil merchandise exports. The present 15% contribution of agriculture to GDP underestimates the importance of agriculture in the economy: many secondary and tertiary activities are agriculture-related. The agricultural sector has also a huge indirect impact on the economy as a whole, as it provides employment and income for about 55% of the active population. The discrepancy between the low contribution of agriculture to GDP and the percentage of those employed in the sector reflects seasonal employment, underemployment and low productivity of the factors of production, which result in low incomes and poor standards of living of those relying on the sector. The low productivity of the Yemeni agriculture is underscored by the current yields, well below actual farmer yields in countries with comparable agro-ecologies.

¹ Republic of Yemen, Poverty Update, December 2002.

² Another source of economic growth was the oil sector.

Agriculture potential and Government objectives. Yemen's Second Five-Year Plan (2001-2005) is targeting agriculture as one of the lead sector for employment-generating economic growth, aiming at a 5.8 percent rate of growth per annum, to achieve: (i) a better level of food security and diversify agricultural exports by raising productivity; and (ii) improve farmers' income. The productivity gap as well as the extent of post harvest losses point to a substantial potential for agricultural development. However, Yemeni agriculture also faces severe constraints to development; in particular the on-going depletion of groundwater resources means that the expansion of irrigated agriculture from deep wells is doomed. On the other hand, for rainfed production systems which represent about half of the cultivated area, there are potentials to improve productivity and sustainability of sorghum, millet, barley, wheat, leguminous crops, and livestock, including honey-bee.³

In spite of the potential for development, traditional rainfed and livestock production systems have been neglected so far for a number of reasons, which have to do in part with: (i) government policies in supporting irrigated agriculture during the past three decades; (ii) the Ministry of Agriculture and Irrigation's (MAI) limited capacity to provide services (research and extension) for these systems; (iii) lack of farmers' leverage to access services, in particular financial services, as well as input and output markets; and (iv) economic boom in Gulf countries in the 1980's which provided employment opportunities to thousands of Yemeni men, mostly from rural areas.

The situation is changing: (i) the GOY is acknowledging that expanding, or even maintaining existing irrigated agriculture based on groundwater mining is not sustainable; and (ii) the aftermath of the first Gulf war, which was earmarked by the return from upwards of 800,000 migrant workers and the end of remittances for the rural areas. As a result, there is nowadays less cash available at the local level for community self-help projects and investment in agriculture while the rural economy has to absorb the returning laborers.

Land and water management. Agricultural activities in the Highlands and the *wadis* of Tihama and the Eastern Plateau are based on soil conservation and water harvesting through terracing, dikes and small dams. Given the positive impact of terraces on water harvesting, groundwater recharge and soil erosion control, their maintenance is key not only for the upper watershed areas, but also for the downstream irrigation along the *wadis*, as well as flood management. However, their maintenance is highly labor intensive, the meager income derived from these low productivity systems, compounded by male out-migration has led to insufficient maintenance, and abandonment of terraces, with the resulting impact on erosion and uncontrolled flooding downstream.

Traditional rainfed production systems and poverty. Most of the poorest people in Yemen are farmers subject to rainfed production conditions for their livelihood. Livestock represents at a minimum twenty percent of farm production in the Highlands and Tihama, and is a major source of cash income for households with inadequate landholdings. Indeed, livestock promotion is an effective way to target the rural poor (they have easier access to livestock than to land or water rights) as well as women, since livestock activities are mostly women's activities.

³ FAO (2002) Economic Incentives and Comparative Advantage of Strategic Crops in the Highlands: A Policy Note on Yemen.

To sum up, the GOY envisages the Project as *a vehicle to implement the Poverty Reduction Strategy Program* in rural areas. Investing in rainfed agriculture and livestock production systems would directly contribute to poverty alleviation and to natural resource management, and benefit rural women, one of the most at risk segment of the population. In addition, through backward and forward linkages, a boost to farming activities would trigger growth in agriculture-related activities, as well as in other aspects of the rural economy as farmers spend most of their incomes on non-tradable goods and services. Finally, helping farmers rehabilitate their terraces would also inject much needed cash into the rural economy.

2. Objectives

The two-pronged Project Development Objective contributes to the higher development objectives of reducing poverty in rural areas and improving natural resources management. The Project would enable farmers to:

- (a) intensify their traditional production, processing and marketing systems in rainfed areas; and
- (b) secure their assets: soil, water, rangeland, seeds and animals

The target population is farmers operating under rainfed conditions (including small spate irrigation systems) in five governorates: Al-Mahweet, Hajjah, Al-Hodeidah, Lahej and Sana'a,

Key indicators

- Farmers, in rainfed areas of the five governorates:
 - (a) Adopt appropriate crop varieties (local and from other regions of Yemen) and improved seed technology practices;
 - (b) Use more livestock services and inputs, and adopt improved animal health and husbandry techniques;
 - (c) Are better organized to access services and input/output markets;
 - (d) Diversify their production systems; and
 - (e) Increase their market transactions.
- The cultivable area protected against soil erosion and with improved water harvesting structures is increased.
- Number of upper watershed catchments re-vegetated.

3. Rationale for Bank Involvement

The Project is conceived as a complement to other Bank-assisted operations aimed at improving basic services for the rural areas (education) and infrastructure (rural roads, water supply and sanitation, water and soil conservation infrastructure), such as, in particular, Social Fund for Development, Public Works Project, Southern Governorates Rural Development Project, Rural Water Supply and Sanitation Project, and Groundwater and Soil Conservation Project (GSCP). These projects bring much needed infrastructure and services in rural areas. The missing link is

to help rural people develop viable economic activities to improve their incomes, and finance infrastructure maintenance of the infrastructure and recurrent costs.

The Project would also help the GOY implement the Rural/Local Development Strategy and the Poverty Reduction Strategy which the Government designed with support from the World Bank.

The Project would help the Ministry of Agriculture and Irrigation improve the services to its farmers, something which is long overdue: the Bank cancelled the preparation of a previous project for this sector. One of the components of the Project is a follow up to the Seeds and Agricultural Services Project, targeting rainfed areas. The Project builds upon the lessons learnt and furthers the progress made in the domain of seed supply under that project.

Finally, the Project may also help implement the GOY's National Adaptation Plan of Action (NAPA). The Plan, which is currently under preparation with GEF support, will address vulnerability and adaptation to climate change on the basis of improving agriculture's adaptive capacity. GEF may be interested in financing certain activities of the Project, in particular, the activities related to the "Farmer-based seed management system" under its Special Climate Change Fund of GEF. These activities may also be eligible to funding from GEF Operational Programme #13 on Conservation and Sustainable Development Use of Biological Diversity.

4. Description

The Project would have three components, corresponding to the development objectives, plus the financing of a Project Management Unit.

Component 1	Farmer- based system of seed management
Component 2	Livestock husbandry and health services
Component 3	Farmer capacity building and investments
Component 4	Project Management

4.1. Component 1: Farmer- based system of seed improvement and management

Component objectives

- (a) Promote on-farm conservation and participatory improvement of prominent landraces; and
- (b) Create a sustainable farmer-based system for seed multiplication of landraces in rainfed areas by encouraging farmer groups to establish themselves as seed producers groups and associations.

Expected results

- One thousand tons of seeds of prominent landraces will be produced and supplied annually to farmers by the sixth year of the project implementation. This will allow to cover 38,000 ha with improved landraces.
- One seed growers' association will be established in each governorate.

Component description

The component will finance R&D activities to characterize, conserve and improve land races and ensure seed quality by national mandated institutions, in close collaboration with local communities. Farmer groups will be involved in on-farm trials for variety screening and evaluation. The component will introduce technological innovations with farmer groups involved in seed production, processing and storage. Land races of ten cereals and pulses are concerned. The component will promote the creation of seed producers groups to produce quality landrace seeds at the farm level. For each governorate, a network of seed producer groups or seed growers' associations will be encouraged to take on the task of seed marketing and distribution. Therefore, the bulk of the funding will be directed to support the establishment of a farmer-based seed production and supply system.

4.2 Component 2: Livestock husbandry and health services

Component objectives

- (a) To increase the capacity of the MAI to fulfill its core functions regarding animal health and production through: (i) the design and adoption of livestock policies and regulations; and (ii) the development of a national epidemio-surveillance network based on improved diagnostic, analysis and quarantine facilities; and
- (b) To establish a public-private partnership for more accessible delivery of proximity veterinary and animal husbandry services and goods to the livestock owners.

Expected results

- A more effective General Directorate for Animal Resources (GDAR) in the fields of disease control and animal production through policy making, staff training, refurbishing of three disease diagnostic laboratories and provision of new laboratory equipment.
- Live animal quarantine grounds rehabilitated at Al Mukha Port and a survey with bill of materials for construction of quarantine grounds at Al Mukalla.
- A menu of tested recommendations for enhancing livestock health and productivity.
- Trained and equipped animal health providers employed by veterinarians in the 5 governorates who will provide livestock owners with better access to basic inputs and services.

Component description

The component will finance activities to: (i) help the General Directorate of Animal Resources improve its capacity to fulfill its core functions (technical and legal advice, training, specific surveys and research programs), (ii) rehabilitate/construct and equip the Central Veterinary Laboratory and three regional veterinary laboratories (Hodeidah, Taiz and Abs); (iii) construct and equip a live animal quarantine holding ground in Al Mukha and prepare the survey for a similar quarantine station around Al Mukalla; (iv) promote the training, employment and

establishment of about 300 veterinary technicians and community animal health workers and identify a menu of tested livestock improvement interventions.

4.3 Component 3: Farmer Capacity-Building and Investments

Component objective

In 22 districts of the five governorates, the component would enable farmers in rainfed areas to:

- (a) upgrade and diversify their agriculture and livestock production, processing and marketing systems, building upon the comparative advantages of rainfed agriculture and livestock, to serve niche local or distant markets;
- (b) get organized to exchange experience among themselves, access services, input and output markets; and
- (c) better conserve soil and harvest water in the Uplands.

Expected results

- Village farmer committees and farmers' interest group, organized at community and inter-community level.
- A series of communities and inter-communities' producer groups' initiatives are completed.
- A watershed is improved in each governorate.
- Farmers have regular access to information on prices and quality of products required on distant markets.
- National traders and exporters have regular updated information on products (quality and quantity) available from specific rainfed areas.
- Approximately 50 local market infrastructures are improved.

Sub-projects

Sub-projects to be funded could relate to the enhancement of: (i) rainfed cereals and legumes production and post-harvest handling, including seed production and management; (ii) livestock raising, bee-keeping and marketing, livestock product processing (cheese, ghee); (iii) small vegetable gardens; (iv) fruit production and post-harvest handling/marketing; (v) coffee production, post-harvest handling and marketing; (vi) handicraft production and marketing, (vii) soil conservation, water harvesting, agro-forestry, and (viii) others...

The activities funded would include:

- Seed money for on-farm testing of improved technologies and small equipment related to improve productivity and production.
- Start-up investments to establish agricultural and livestock input outlets at village or district level, or seed storage/bank, etc.
- Financing of labor-saving devices, especially for women, such as biogas stoves.

- Small agro-processing equipment, in particular for milk collection, storage and processing (ghee and cheese).
- Support for post-harvest handling and marketing activities.
- Technical advice and training
- Organizational and managerial capacity-building for existing and/or newly formed farmer groups/organizations.

5. Financing

Source:	(\$m.)
BORROWER/RECIPIENT	2
INTERNATIONAL DEVELOPMENT ASSOCIATION	20
Total	22

6. Implementation

The MAI will implement Components 1 and 2. The Social Fund will implement Component 3.

Project Support Unit (PSU for the MAI components). To ensure timely and efficient implementation, the Government will create a Project Support Unit (PSU) based in Sana'a. The PSU will not be an implementing entity but will support the project executing agencies. It will be headed by a manager, and include one procurement officer, a certified accountant, one bilingual secretary, seconded from MAI and MOF and financed from the national budget, or by consultants recruited under IDA guidelines and financed from the proceeds of the Credit.

The PSU will be responsible for:

- Preparing, advertising, evaluating tenders and awarding contracts for the procurement of goods and services for the various entities involved in the project;
- Obtaining relevant clearances, including customs and transporting equipment to the project site;
- Managing the project special accounts and withdrawal/replenishment applications;
- Keeping project accounts on regular basis with sound auditing procedures;
- Consolidating and submitting to IDA project progress, mid-term as well as annual reports; and
- Serve as a liaison between the Ministry of Agriculture and Irrigation, the Social Fund, the Ministry of Planning and International Cooperation, the Ministry of Finance and IDA.

Specific implementation arrangements for each Component

Component 1: Farmer-based system of seed management. The component will be implemented through contracts awarded on a competitive basis.

Component 2: Livestock husbandry and health services. The General Directorate of Animal Resources (GDAR) will have overall responsibility to administer Component 2.

Component 3: Farmer capacity building and investments. The Social Fund would be in charge of the implementation.

7. Sustainability

The key feature of the Project to ensure sustainability of the activities is the capacity building of the main economic actors, the farmers as well as the agricultural service suppliers. The project will help farmers get organized to: (i) access input and output markets; (ii) produce and store their own seeds through a seed grower association; and (iii) identify and support members of their communities to become community animal health workers.

8. Lessons Learned from Past Operations in the Country/Sector

As mentioned above, rainfed agriculture has been largely neglected by government services, in spite of its potentials and the impact that improved productivity in rainfed areas could have on rural poverty. The need to be proactive to achieve the Millennium Development Goals, as well as the alarming depletion of groundwater resources, has led the Government to shift its attention to rainfed agriculture and livestock development, which is the reason why the proposed project focuses on rainfed areas.

In terms of design, four World Bank-financed projects are particularly relevant to the proposed operation: the Agricultural Sector Management Support Project (ASMSP) which closed on June 30, 2000, the Seeds and Agricultural Services Project which closed on June 30 2004, the Groundwater and Soil Conservation Project and the Social Fund III (ongoing). The ASMSP supported the Ministry of Agriculture's services, i.e. the supply side of services. These types of projects that the Bank promoted in the 1980s and 1990s have shown their limits. In Yemen, as well as in other parts of the World, public service agents demonstrated more accountability to their hierarchies, than to the users of their services, the farmers, thus their responsiveness to farmers' needs was limited. Small unorganized farmers have had little leverage, if any, over Ministry services or the research institute. In addition, even using the so-called participatory on-farm research and extension methods, farmers were asked to react to technologies proposed by researchers and extension agents, rather than to offer their own ideas about potential research and extension themes, or bring their indigenous knowledge to shape research methodologies and extension programs. As a result, the ASMSP ended up financing many ineffective activities, with limited results for the farmers.

The proposed Project therefore purports to support the demand side of services as well as the supply side. In particular, it aims at strengthening the capacity of farmers to organize themselves to demand services, and give them access to financial and technical resources to implement the development activities of their choice. Hence, there will be two flows of funding: one addressing the need of the farmers (Component 3), the other one supporting the MAI's regulatory functions and the capacity of service providers (well-targeted companies, cooperatives and NGOs) to serve farmers. In the end, it is hoped that farmers, through an organization of their own, will be better able to make their voices heard and access services.

In order to ensure accountability of service providers to the farmers, the project is introducing contracting of services to farmers, through a tripartite contractual arrangement: the farmer group, the Project and the service provider. The service provider, in the case of agriculture and livestock, may be mostly the staff from the District Agricultural Offices or Development Agencies (such as the Tihama Development Agency) because the capacity in NGOs or private sector may be limited. However, it is expected that the contractual arrangement will give more leverage to the farmers. Finally, the project aims at empowering farmer groups and their representatives for the selection and implementation of sub-projects. The criteria for sub-project selection will be agreed with the farmer representatives; there will be a negative list of activities that the Project cannot finance, but in the end the selection process rests with the farmers. This mechanism, especially if the farmer committees know the budget they have available which would be the case, is an effective empowering instrument.

The Seeds and Agricultural Services Project (SASP) proved to be very successful with regard to putting in place a system to improve the quality of seeds, but the involvement of the SASP in rainfed areas was limited. The present project is building upon the lessons from SASP, especially with regard to involving farmers at an early stage in the choice of land races, and setting up villager-managed seed cleaning and storing facilities. SASP pioneered work under contract with ARA and seed companies to enhance the efficiency of resources used. As mentioned above, the successful contractual arrangements will continue, and will involve farmer groups under Component 4.

Through Social Fund I, II and on-going Social Fund III, a very effective structure has been put in place. The mechanism enables the GOY to reach remote rural communities and respond to their needs on a demand basis. It also enables to involve staff from various ministries in the implementation of the activities chosen by the communities, and provide them with good working conditions under contractual arrangements. The present project will use this mechanism to involve staff from the DAOs and TDA. Finally, the Social Fund has attempted to introduce income-generating activities, in particular in agriculture and livestock production, with mixed results. The present Project will benefit from these early experiences.

Experience gained from projects funded by other donors was also considered, in particular the UNDP-financed Community-Based Regional Development Project, GTZ-funded IDAS I, II and III, and CARE project in Al-Mahweet Governorate. In the districts where the Community-based Regional Development Project was implemented, the capacity of the farmers to organize themselves increased substantially, but the project design was too human resource intensive to be easily replicable. Also, the UNDP project required that farmers had formed an association, officially registered, before financing any activities with them, which resulted in a long period of capacity-building only. In the present project, the requirement is only to have the farmer group registered with the District local council. IDA's project has been concentrating only on capacity building, with the idea that farmer groups, once capacitated, go to the Social Fund, or other NGOs to get their sub-project funded. While the principle is good in practice, however, the newly formed farmer groups experience a lot of delays and frustration before they get funded, as the other donors they go to may have other priorities. Finally, CARE project is typical NGO work: good work in collaboration with the Al-Mahweet Agricultural Office, but very resource intensive and focused on few villages.

9. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[]	[X]
Pest Management (OP 4.09)	[]	[X]
Cultural Property (OPN 11.03 , being revised as OP 4.11)	[]	[X]
Involuntary Resettlement (OP/BP 4.12)	[]	[X]
Indigenous Peoples (OD 4.20 , being revised as OP 4.10)	[]	[X]
Forests (OP/BP 4.36)	[]	[X]
Safety of Dams (OP/BP 4.37)	[]	[X]
Projects in Disputed Areas (OP/BP/GP 7.60)*	[]	[X]
Projects on International Waterways (OP/BP/GP 7.50)	[]	[X]

The EA confirmed the "Category B" classification of the project under World Bank safeguard policies, finding no significant, cumulative or irreversible environmental impacts from the project. Furthermore, no other safeguard policies apply. However, capacity building of farmers and MAI staff in integrated pest management is recommended to address any pest management concerns, as well as management and conservation of natural areas to address natural habitat considerations.

10. List of Factual Technical Documents

Project Preparation Document, February 2005
Hajjah Governorate Preparation Report, October 2004
Lahej Governorate Preparation Report, December 2004
Hodeidah Governorate Preparation Report, December 2004
Sana'a Governorate Preparation Report, December 2004
Al-Mahweet Governorate Preparation Report December 2004
Rural/Local Development Strategy Report, May 2003
Social Assessment, May 2005
Environmental Assessment and Environmental Management Plan, June 2005

11. Contact point

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* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas.*

12. For more information contact:

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