

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

Report No.: AB4484

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| <b>Project Name</b>                              | RY-FLOOD PROTECTION AND EMERGENCY RECONSTRUCTION ADDITIONAL FINANCING II  |
| <b>Region</b>                                    | MIDDLE EAST AND NORTH AFRICA  |
| <b>Sector</b>                                    | Roads and highways (50%); Flood protection (50%)  |
| <b>Project ID</b>                                | P115178   |
| <b>Borrower(s)</b>                               | GOVERNMENT OF YEMEN   |
| <b>Implementing Agency</b>                       | Ministry of Public Works and Highways   |
| <b>Environment Category</b>                      | <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined) |
| <b>Date PID Prepared</b>                         | January 20, 2009  |
| <b>Estimated Date of Appraisal Authorization</b> | January 20, 2009  |
| <b>Estimated Date of Board Approval</b>          | March 24, 2009  |

### 1. Key development issues and rationale for Bank involvement

*Disaster risks and vulnerability in Yemen.* Yemen is a disaster-prone country. Disasters such as floods, earthquakes and landslides are estimated to affect an average of 100,000 persons annually according to the Emergency Events Database. Floods are the most important and recurring disaster in the country. Over the last two decades, Yemen has become increasingly vulnerable to natural disasters due to high rates of population growth and urbanization, unplanned and unregulated urban development, and lack of environmental controls. Indeed, Yemen's estimated average annual urban population growth rate over the past decade of 5.1% is the highest in the MENA Region and one of the highest in the world. Increased concentration of physical assets and vulnerable population in high-risk areas are leading to increased exposure to adverse natural events.

*Unclear disaster risk management/reduction responsibilities.* The institutional arrangements for disaster risk management in Yemen are still at an early stage, lack coordination, and need further strengthening. The Ministry of Interior's Directorate for Civil Defense prepared in 2006 a draft national disaster management framework governing the roles and responsibilities of concerned entities under the Civil Defense Law of 1997 and is currently working on operationalizing this framework. The Ministry of Water and Environment's Directorate of Environmental Emergency is undertaking some parallel initiatives, but coordination has been lacking.

*The role of and challenges facing local governments in the context of Yemen's decentralization policy.* In parallel, the Local Authorities Law No. 4 of 2000 devolved major policymaking, planning, implementation and service delivery responsibilities to local governments including in the area of disaster risk management and reduction. Initially, implementation of decentralization was not commensurate with the provision of law for several reasons including lack of resources, continued control by the central line ministries through their branch offices, and weak capacity at the local level. Yet, since 2007, there has been increasing momentum in support of greater

decentralization; the Ministry of Local Administration completed a decentralization strategy and proposed revisions to the Law allowing for greater fiscal and political decentralization, and for the first time in Yemen Governors were elected in May 2008. As such, there needs to be greater involvement at the local government level in disaster risk management and reduction to align with Yemen's decentralization policy and ensure that plans and policies are formulated at the level that is closest to the communities and thus can have a realistic chance of being implemented.

*The recent disaster affecting Hadramout and Al-Mahara Governorates and its impact.* Between October 23 and 25, 2008, a level-three tropical storm caused heavy rain for over 30 hours and widespread flooding in several locations in the Hadramout and Al-Mahara Governorates in Yemen. The disaster caused the death of 73 persons, scores of injured, destruction of 2,826 houses and huts and partial damage to another 3,679 houses, and the displacement of about 25,000 people who sought temporary shelter in public buildings or with host families. The total effects of this disaster (both the damages to infrastructure and physical assets and the ensuing economic losses) were estimated at YR 327,551 million (US\$1.6 billion), equivalent to about 6% of Yemen's Gross Domestic Product (GDP) based on a 2007 GDP figure of US\$ 22.5 billion. Hadramout Governorate was significantly more affected (96% of the total disaster effects, comprised of 94% of total damages and 98% of total losses) compared to Al-Mahara (4% of the total disaster effects, including 6% of total damages and 2% of total losses). Wadi Hadramout was the worst hit region (67% of the total disaster effects, comprised of 63% of total damages and 72% of total losses), followed by the coastal areas, known as Sahel Hadramout (with 29% of the total disaster effects, comprised of 31% of total damages and 26% of total losses).

The damage to infrastructure, especially roads, power, water and wastewater, and irrigation and flood protection systems, has been extensive. The regional road network in Hadramout and Al-Mahara was badly affected with 59 km destroyed or sustaining heavy damage. This led to the interruption of traffic for over two weeks until the Ministry of Public Works and Highways (MOPWH)'s General Corporation for Roads and Bridges opened temporary bypasses.

The impact on agricultural land and people's livelihoods has been devastating. A total of 22,902 Feddans (acres) of cultivated agricultural land and 51,455 Feddans of uncultivated land were damaged in both Governorates due to soil erosion. Public and private irrigation infrastructure also sustained significant damage. In addition, about 550,000 palm trees and 160,000 fruit trees were uprooted. Some 58,500 livestock heads (sheep, goats, camels and cattle) died due to the water surge, and as much as 309,103 honey beehive cells were washed away. Overall, about 700,000 persons—over 50% of the total population in the affected areas—have had their livelihoods destroyed or significantly affected, of which two-thirds live in Wadi Hadramout. In response, the two Governorates were declared by the Government as disaster areas.

Some pledges have already been made to the UN-coordinated emergency relief work and to the infrastructure reconstruction efforts, which the World Bank was asked to coordinate. Even though Yemen has already received some pledges from the Kingdom of Saudi Arabia (US\$100 million for recovery), the Arab Fund for Social and Economic Development (US\$135 million for reconstruction) and the United Arab Emirates (US\$35 million for shelter), the magnitude of the disaster effects to an already fragile IDA country and the extent of reconstruction and recovery needs—estimated at close to US\$1 billion (excluding funds needed for possible resettlement)—

call for much larger support from the donor community. This is especially critical since, in the absence of support, the number of poor in Yemen would, as a result of the income losses, increase by about 1.1% of total population in 2009. The poverty impacts in Hadramout would be acute with the percentage of poor rising from 28% to near 51% and the poverty gap increasing threefold to 12% in 2009, the year of peak impact of the disaster.

*Government request and rationale for Bank involvement.* On October 27, 2008, the Government of Yemen (GOY), represented by the Ministry of Planning and International Cooperation (MOPIC), formally requested the International Development Association (IDA)'s support to carry out a Damage, Loss and Needs Assessment (DLNA) of the aftermath of the storm and floods in Hadramout and Al-Mahara Governorates, to leverage support from the Global Facility for Disaster Reduction and Recovery (GFDRR), and to prepare an emergency operation to reconstruct/rehabilitate selected priority infrastructure damaged by the October 2008 storm and floods.

The IDA has decades of global experience in post-disaster reconstruction, disaster risk reduction and management. As such, the IDA was able to leverage GFDRR support to assist the GOY in the DLNA and the post-disaster recovery and reconstruction effort, in addition to the earlier support to assist the GOY in undertaking a risk and vulnerability mapping at the national level and supporting disaster risk reduction efforts, and including a pilot in Sana'a Municipality. IDA was also able to field a multi-sectoral team of 20 experts to the affected areas joined by representatives from the United Nations International Strategy for Disaster Reduction and the International Federation for Red Cross and Crescent, to work with 80 GOY officials in preparing the joint DLNA. The joint DLNA was completed in January 2009, and its recommendations would govern the recovery and reconstruction effort. The World Bank with GFDRR support is also providing technical assistance to the GOY in structuring the implementation mechanism for the reconstruction and recovery effort and in planning to leverage donor support.

IDA also has a large multi-sectoral portfolio in Yemen that encompasses urban and rural development, flood protection, infrastructure and housing, health and education among others, and as such, it is uniquely placed to assist the GOY in the reconstruction and recovery process, working to support local and central government in overseeing the unprecedented task of reconstruction. The recently approved Operational Policy on Rapid Response to Crises and Emergency (OP/BP 8.00) also provides streamlined procedures for accelerated project processing to swiftly provide support to the affected areas. Finally, ongoing IDA projects (the Taiz Municipal Development and Flood Protection project, the Public Works project, the Social Fund for Development and the Port Cities Development Program) bring advantages in related flood protection and infrastructure rehabilitation works, and in strengthening local governments' capacity to increasingly assume their mandate.

## **2. Proposed objective(s)**

The project's development objectives are to: (i) protect residents, economic activities and infrastructure from the destructive effects of seasonal flooding in Taiz, Hadramout and Al-Mahara; (ii) restore access to critical road infrastructure damaged by the floods and; (iii) strengthen the capacity of local governments and support decentralization.

### 3. Preliminary description

The proposed project is an Additional Financing to, combined with a restructuring of the Taiz Municipal Development and Flood Protection Project (TMDFP), processed under OP8.0. The restructuring reflects the GOY's objective of evolving the TMDFP from a single city (Taiz) focus on infrastructure construction into a national level flood protection program.

Consistent with the components of the TMDFP, investments under the proposed Additional Financing would be carried out under the first and third components, covering flood protection and infrastructure, and capacity building respectively. No investments would be allocated for the second component of TMDFP covering resettlement activities, as the activities proposed to be financed under Additional Financing are not expected to trigger resettlement.

Component 1—Flood protection and infrastructure rehabilitation (US\$38.5 million equivalent, of which IDA share US\$32.8 million equivalent). The objective of this component is to rebuild selected critically damaged infrastructure in the affected areas to higher standards that could withstand future flooding events. It comprises of two sub-components focusing on the rehabilitation and reconstruction of priority damaged segments of the regional road network and the flood protection system, as follows:

- *Regional road rehabilitation sub-component (US\$24.3 million equivalent, of which IDA's share is US\$20.6 million equivalent).* Interventions under this sub-component include rehabilitating and reconstructing selected priority regional roads where critical segments have been destroyed by the flooding, and retrofitting with adequate storm water drainage systems. This sub-component will finance the repairs of damages over the entire regional road network in the Wadi Hadramout area (the worst affected by the disaster) as well as the Riyan-Ben Aifan regional road in Sahel Hadramout (one of two road connections between Wadi Hadramout and the rest of Yemen, the other being Ben Aifan-Al-Abr). The flood-related damages to be tackled under the project include: (i) washout/erosion of one or both sides of the road caused by inadequate slope protection structures including some instances where the whole road has been damaged and traffic rerouted; (ii) damages to and blockages of single or multi-cell box culverts and pipe culverts causing consequential local damages to the road; (iii) partly or fully damaged Irish crossings (cement concrete drifts across river beds); (iv) damages to bridges and bridge abutments; (v) minor damages to road pavement and shoulders due to soaking of the pavement and subsequent loss of load bearing capacity requiring asphalt patching and shoulder rehabilitation; and (vi) damages and blockages of roads due to rock fall and slides caused by extensive rain and which led to subsequent damages to road pavements and side drains.
- *Flood protection system rehabilitation sub-component (US\$14.2 million equivalent, of which IDA's share is US\$12.6 million equivalent).* Interventions under this sub-component include rehabilitating and reconstructing selected priority components of the flood protection system in the affected areas, which were damaged or affected by the storm and floods, and which served to protect human settlements and agricultural lands. Restoring the functioning of the main elements of the flood protection system is thus a

key priority to protect agricultural land and shelter/human settlements, and thus facilitate post-disaster economic recovery and safeguard any future reconstruction from the effects of future flooding events. Flood protection works that are both effective and labor-intensive (such as the use of Gabion walls) will be relied upon where feasible to enable the creation of temporary job opportunities for the affected communities to partly support the households that lost their income and livelihoods in the disaster, for the duration of the reconstruction and recovery period.

Component 2 – Resettlement of Affected Persons (US\$0.0 million equivalent). No investments would be allocated for the second component of TMDFP covering resettlement activities.

Component 3—Capacity Building (US\$2.5 million equivalent, of which IDA share US\$2.2 million equivalent). The objective of this component is to prepare a flood protection plan for the critically damaged and vulnerable areas of Wadi Hadramout; a storm water drainage master plan for Mukalla city; help set up local government capacity in disaster preparedness, mitigation and response; finance the cost of design/tender document preparation and construction supervision; and cover Project Management expenses over the three-year implementation period.

#### **4. Safeguard policies that might apply**

This Additional Financing is classified under Environmental Category B, in line with the existing TMDFP. This is because the investments under the proposed Additional Financing consist of road rehabilitation at wadi crossings within existing right-of-ways, restoration of damaged irrigation systems and provision of flood protection works at selected sites comprising of small works within existing wadi channels. Since the detailed designs will not be ready by appraisal, in accordance with OP/BP 4.01 for projects eligible under OP/BP 8.0, an Environmental and Social Screening and Assessment Framework (ESSAF) will be prepared to govern safeguards screening and compliance activities during implementation. The ESSAF will include a chance find procedure and govern the assessment of the impact of flood protection rehabilitation works on natural coastal habitats.

Similarly, while project-financed infrastructure rehabilitation and reconstruction activities are not expected to trigger OP4.12 on Involuntary Resettlement, a Resettlement Policy Framework (RPF) was nonetheless prepared by the implementing agency. In the unlikely event that OP4.12 is triggered (a feasibility study is currently underway of a small realignment of one segment of the Riyan-Bin Aifen highway away from a Wadi onto an adjoining publicly-controlled and uninhabited desert area, with the work likely not to be financed under the current Additional Financing), a Resettlement Action Plan (RAP) or more likely an Abbreviated Resettlement Plan (ARP) would therefore be prepared as may be needed.

## 5. Tentative financing

| <b>Source:</b>     | <b>(\$m.)</b> |
|--------------------|---------------|
| BORROWER/RECIPIENT | 6.0           |
| IDA Grant          | 35.0          |
| <b>Total</b>       | <b>41.0</b>   |

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