

The World Bank  
Middle East and North Africa Region  
Sustainable Development Sector Department (MNSSD)

## **First Joint Mission - Yemen Pilot Program for Climate Resilience Terms of Reference**

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### **1. Background**

Vulnerability Context: Yemen has already been experiencing significant climatic change. The historical records since the 1970s indicate continuous warming over time. The trends show more rapid increase in summer temperature (+0.2°C/decade) than in winter temperature (+0.15°C/decade). In terms of rainfall, while there does not seem to be an obvious trend of total annual precipitation,<sup>1</sup> the extreme events are increasingly becoming a source of concern. On October 25, 2008<sup>2</sup>, flash floods have claimed the lives of more than 140 persons and left more than 20,000 without shelter in the Hadramout and Maharah provinces.

Further changes are expected in the future, with considerable impacts on freshwater availability in the country, and hence on the nation's critical economic sectors (including water, agriculture and health). According to the Intergovernmental Panel on Climate Change (IPCC) 4<sup>th</sup> Assessment Report, Yemen is expected to warm by 3-4°C by 2080s under the A1B SRES simulation scenario—which is roughly 1.5 times the global mean response. The outlook for precipitation is less obvious. There is no clear pattern of consensus amongst the 21 Global Circulation Models (GCMs) by IPCC AR4 about the sign of the projected changes in winter, summer or annual rainfall over Yemen. The projected distribution of precipitation in Yemen will also be more erratic, with possible higher frequency of high-intensity events. This will have significant implications on flood risks; land degradation; and availability of water for various uses, including agriculture, urban areas and the industrial sector.

Yemen currently faces serious problems of extreme water scarcity<sup>3</sup>. It has one of the lowest rates of annual per capita freshwater availability (195 m<sup>3</sup>) in the world, compared to a regional average annual per capita of 1,250 m<sup>3</sup>. Water use efficiency is low and the capacity to manage water resources is also weak, despite the hydrological scarcity prevalent in the country.

Rapid development of water supply has helped develop Yemen's agriculture sector, which currently uses some 90% of the total water resource available. However, water demand is still rising, while water resources are virtually all developed, and competition is growing between users at both local and regional levels. A major concern is groundwater, which is being mined at an alarming rate—depleted at more than four times the recharge rate in some major aquifers. Because of its dependence on unpredictable water availability (surface water that is extremely vulnerable to changes in climate, and groundwater resource that is fast depleting), the relatively strong agricultural sector in Yemen is highly exposed to the risks of climate variability and change.

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<sup>1</sup> Some regions in the country are becoming drier, others wetter. For example, since 1970 annual rainfall has fallen at all 7 stations close to Wadi Tuban whereas 6 out of 11 show modest increases in the Wadi Zabid.

<sup>2</sup> Reported on the CNN news website @ <http://edition.cnn.com/2008/WORLD/meast/10/25/yemen.flooding/index.html>

<sup>3</sup> According to the World Health Organization (WHO), a nation with annual per capita water resource of less than 1,000 m<sup>3</sup> is considered a high water scarce country.

Furthermore, Yemen's coastal ecosystems are vulnerable to extreme climatic events and to the impacts of rapid warming. Sea level rise will increase coastal flooding, raise costs of protection, lead to deterioration of wetlands, mangroves and corals, and increase saltwater intrusion into surface and groundwater, thereby impacting key sectors of the economy. The predicted decline of almost 15% of the country's GDP from the fisheries sector will have a severe impact on economy which employs a significant number of the population that live along the coast.

In sum, to the extent that it can exacerbate water stress, jeopardize food security, pose irreversible threat to the natural and agro-ecosystems and increase exposure to natural disasters, *climate variability and change is a pressing poverty and development issue that might not only hinder achievement of the Millennium Development Goals (MDG), but could even undo the modest gains in economic growth the country has recorded in the past few years.*

Pilot Program for Climate Resilience (PPCR) as a Response Mechanism: Due to its high vulnerability to climate change, Yemen has been invited to participate in the Pilot Program for Climate Resilience (PPCR) as one of the pilot countries. PPCR is the first program under the Strategic Climate Fund (SCF) of the Climate Investment Funds (CIF). The objective of the PPCR is to provide incentives for scaled-up action and transformational change through pilot projects that demonstrate how to integrate climate risk and resilience into core development planning, while complementing other ongoing development activities in a given country. PPCR program will be country-led, and will enable pilot countries to transform country-specific plans and investment programs to address climate risks and vulnerabilities, building on National Adaptation Programs of Action (NAPAs) and other relevant country studies and strategies. Substantial programmatic resources will then be made available to help fund the newly identified public and private sector investments.

Under the PPCR, up to 1.5 million dollars will be allocated for the selected pilot countries for the preparation of the *Strategic Program for Climate Resilience*, and US\$30-60 million will be made available for implementation of each pilot program in the key vulnerable sectors, with approximately half of the fund available for grant financing and the rest is in the form of highly concessional loan. Pilot countries will not be obliged to accept concessional loan financing as a condition for receiving grants.

PPCR process is divided into two phases. In Phase I, a *Strategic Program for Climate Resilience (SPCR)* will be developed, and specific projects/programs that are proposed in SPCR will be implemented in Phase II. The indicative timeframe for Phase I is in the range of 3 to 18 months, with an understanding that most countries will choose and be able to achieve the aims of the process within a year from the time of the joint mission. The key activities during Phase I include: a) initial joint mission to develop a proposal and budget for the *Strategic Program*; b) tasks related to the development of the *Strategic Program*; c) second joint mission to review and finalize the *Strategic Program*; and d) Submit the final *Strategic Program* with specific investment recommendations as the output of Phase I. This mission constitutes the first joint mission that will embark on the formal process to develop the SPCR.

PPCR Progress in Yemen: In preparation for the first Joint Mission, the World Bank and the GOY conducted a scoping mission from July 18-24, 2009 with the objective to: (i) review and consolidate relevant on-going activities on climate resilience in the different sectors, (ii) discuss the objectives structure and phases of the PPCR, (iii) identify preparatory work required prior to the planned first Joint Mission, and (iv) coordinate with active development partners and agencies to share information and identify possibilities to enhance the effectiveness of the program. The

scoping mission was able to introduce the PPCR and its objectives, and lay a good initial ground for discussion with various stakeholders. The following progress has been made on the key agreements reached during the scoping mission:

1. *Establishment of the Inter-Ministerial Climate Change Council*—It was agreed that the MWE will send its request for the formation of this Council to the Cabinet. The text of the decree has been finalized for Cabinet consideration, and should be approved before the start of the Joint Mission in mid November
2. As agreed during the scoping mission, and in order to facilitate coordination and collaboration by various stakeholders, including relevant line ministries and agencies within the GOY and development partners, EPA has prepared a complete list of stakeholders who should be consulted and engaged as part of the PPCR process. Stakeholder consultations during the Joint Mission will draw from list. . It was also agreed that EPA will compile all relevant studies/ investment projects and TAs that deal with climate related issues by end of September 2009 – this has been done. This will help facilitate review of available information and lessons learned, and identify gaps for implementation under the PPCR. This list will guide the discussion and presentations during the Joint Mission – as a first step of the Phase I stocktaking process.
3. Given that the output of the first Joint Mission is a project plan for phase I, including staff and budget, it was agreed that EPA will prepare a draft project plan for review and expansion during the first Joint Mission .

## **2. Timeframe**

*Timeframe for initial joint mission*—The first joint mission is planned to take place from November 14-23, 2009 The mission, will in include a two day workshop in order to brainstorm and share knowledge with a wide variety of stakeholders (government, civil society group, development partners, etc) regarding climate related issues in Yemen, interventions (completed/ ongoing/ planned), lessons learned, and identify opportunities to complement existing and planned activities Given their experience on climate change related issues in Yemen, partnership with UNDP, EU, IFAD, and bilateral development partners will be sought.

The TOR for this first joint mission have been jointly prepared by the GOY, The World Bank and IFC.

## **3. Mission Objectives**

Following PPCR guidelines, the main objective of the joint mission is to assist Yemen to put in place a clear process for formulating a Strategic Program for Climate Resilience. The mission will review progress, plans, and strategies that take account of climate risks, as well as other relevant information, and provide a platform for joint work of the development agencies, the private sector and NGOs to support the GOY in the formulation of an agreed strategic approach and investment program for integrating climate resilience into core national development and key sector strategies and actions.

## **4. Scope of Work**

The main activities of the joint mission will include: (i) follow up on agreed actions during the scoping mission in July 2009; (ii) taking a stock of country level activities on climate resilience, and identification of gaps, based on the overview of studies/investment projects implemented in

the country; (iii) initial assessment of opportunities for mainstreaming climate resilience in national and local development policy, planning, regulatory and budgetary processes and in the key vulnerable sectors; (iv) broad based consultations with national stakeholders and development partners; (v) identification and outline of implementation arrangements for the activities under Phase 1; (vi) preparation of a detailed proposal for developing the Strategic Program during Phase 1 to include, *inter-alia*, a work program, timetable, implementation arrangements, roles and responsibilities and budget.

*The scope of the mission's work will specifically focus on the following tasks:*

**Country Stocktaking on Climate Resilience:** The mission will take stock of current country-level activities which could or do build climate resilience, and will focus on the following key issues:

- (a) Assess current practices, institutional arrangements and capacity for the use of climate risk information in relevant institutional structures (national, regional, local) and in cross-sectoral mechanisms; and assess agency mandates for addressing climate change adaptation. The partial list of ongoing and implemented climate related activities in Yemen developed during the scoping mission should be completed. The assessment should include the adequacy (coverage and quality) of existing data and other information on climate risks, vulnerabilities and adaptation assessments and the capacity building needs in relevant agencies, in order for them to provide and apply timely, targeted, credible and defensible climate risk information, including climate forecasts and projections, as appropriate to specified timescales and applications
- (b) Assess the range of available relevant information and participatory processes to determine climate related vulnerabilities and impacts of key economic sectors and stakeholders including the private sector), and identify significant gaps;
- (c) Identification of gaps which need to be filled and prioritization of these for consideration under phase I of the PPCR.

**Sector Assessments:** The mission will undertake an assessment of relevant sector development policies and strategies and identify needs and options to integrate climate change adaptation with the support of the PPCR in order to make climate resilience an integral part of the country's development and sector strategies. This will also build on the work that the GoY has done under its NAPA.

**Broad Based Consultations:** The mission will consult widely with key national stakeholders, including civil society and academia, development partners and the private sector to the extent possible in order to incorporate a wide range of views. This participatory process would help to build national ownership of the PPCR, and reach consensus on the priorities for action by the public and private sectors given the climate risks facing the country.

**Identification and Outline of Phase 1 Activities:** The mission will prepare an annotated outline of the proposal for preparing the Strategic Program for Climate Resilience to be attached to the Aide Memoire. This would include the activities to be carried out, implementation arrangements, timetable, budget and expected results.

**Work Program and Funding Proposal to Develop the Strategic Program:** Following the mission, the government, supported by the World Bank and IFC (and in consultation with other development partners as identified commonly during the mission), will prepare a detailed work program and funding proposal for carrying out phase 1 activities, which will result in preparing a

Strategic Program on Climate Resilience. This will follow the general structure provided in the “Guidelines for Joint Missions to Design PPCR Pilot Programs (Phase 1).”

## **5. Mission Outcome:**

The following would be the main outcomes of the mission:

- a) Substantive discussions on climate related issues and opportunities in Yemen with a wide range of stakeholders, involving various agencies in the GOY, development partners, private sectors, and civil society groups (NGOs, academia, etc), and better understanding of priorities identified by the government in-line with its development agenda;
- b) An Aide Memoire (jointly produced by the Government and the Bank), including an Annex presenting an outline of the phase 1 activities (Annotated outline of the draft proposal to develop the Strategic Program for Climate Resilience); stocktaking of relevant ongoing activities and initiatives, including upcoming priority sectors for PPCR, ongoing and planned programs and large investments funded by governments and development partners that are highly climate sensitive and activities addressing climate resilience; and
- c) Draft Work Program and Funding Proposal to develop the Strategic Program to be prepared by the government for submission to the PPCR Sub-committee (to be completed after the mission).

## **6. Mission Composition**

The mission will be carried out under the auspices of the Ministry of Planning and International Cooperation, with technical coordination and support provided by Mr. Anwar Noaman, Head of the Climate Change Unit, Environment Protection Authority.

The mission is suggested to comprise the following specialists:

- *Agriculture Specialist*: working closely with relevant line ministries and development agencies active in the sector, assess current climate risks to agriculture and related sector investments including relevant infrastructure as well as on-going and/or planned projects and programs, and the potential for increasing climate resilience in the sector; Garry Charlier, Senior Operations Officer, World Bank;
- *Water Sector Specialist*: working closely with relevant line ministries and support groups, assess current climate risks to water and related sector investments including infrastructure as well as on-going and/or planned projects and programs, and the potential for increasing climate resilience in the sector; Bekele Debele Negewo, Water Resource Specialist. World Bank
- *Natural Resource Management/CZM Specialist*: working closely with relevant line ministries and support groups, assess current climate risks to ecosystems and related investments, including on-going and/or planned projects and programs, and potential for increasing climate resilience; Kanta K. Rigaud, Sr. Environmental Specialist, World Bank
- *Social Sector Specialist*: assess the social dimensions of climate risks relevant for the Strategic Program on Climate Resilience; Dorte Verner, Sr. Economist, World Bank
- *Private Sector Specialist*: assess climate risk related issues of the private sector (IFC);
- *Institutions Specialist*: working closely with all of the technical specialists to assess the present mandates and capacity of relevant institutions to engage in climate risk management activities and to implement specific activities under the program; assess institutional capacity of sectoral units for cross-sectoral collaboration in order to implement climate adaptation projects that span across sectors; and identify opportunities for capacity

building that could be supported through the program; Kanta K. Rigaud, Sr. Environmental Specialist, World Bank

- *TTL*: Assist EPA in coordination of the mission, lead the dialogue with government, national stakeholders and development partners, assist EPA in preparing the Aide Memoire, and finalizing work program and funding proposal. Dorte Verner Sr. Economist, World Bank
- *PPCR Coordinator*: To assist EPA in the coordination of the mission, its preparation, drafting of Aide Memoire and funding work program and proposals, and reporting. Johanne Holten, JPO, World Bank and Gamal Al Harrani, Consultant.

From the World Bank side *Mmes/ Messrs Dorte Verner* (Sr. Economist and Task Team Leader, MNSSD), *Naji Abu Hatim* (Sr. Rural Development Specialist, MNSSD), *Kanta K. Rigaud* (Sr. Environmental Specialist, MNSSD), *Bekele Debele Negewo* (Water Resources Specialist, MNSSD), *Johanne Holten* (JPO, MNSSD) and *Gamal Al Harrani* (Consultant) will participate in the mission. FC will also participate in the mission.

## **7. Timeframe**

It is envisaged that the mission will consist of a total of 5 weeks of work including the preparation of the mission, the time on the field and report writing. The mission will be in Yemen during November 14 – 23, 2009.

## **8. Partners**

Key line agencies, including, but not limited to the following:

- Ministry of Planning and International Cooperation (MoPIC) - Chair
- Ministry of Water and Environment (MoWE)
- Environmental Protection Agency (EPA) – technical secretariat
- Ministry of Agriculture and Irrigation (MoAI)
- Ministry of Fish Wealth (MFW)
- Ministry of Finance (MOF)
- Ministry of Local Administration (MOLA)
- National Water Resource Authority (NWRA)
- Civil Aviation and Meteorological Authority (CAMA)

The following stakeholders will further be included: civil society, private sector and academia to ensure that the process of elaboration of the climate resilience development plan is inclusive and reflects the needs and priorities of these different groups. This has been confirmed in the Governments Acceptance of offer to participate template dated June 21, 2009.

Development partners including the following shall also be engaged in the Joint Mission based on their on-going relevant engagement on the agenda:

- GTZ/KfW
- UNDP
- JICA/JBIC
- The Netherlands
- DFID
- USAID

- DANIDA
- IFAD
- EU
- AFD