

## **Review of the Government of Mozambique's Strategic Program for Climate Change Resilience**

**Title of the investment plan:** Mozambique Strategic Program for Climate Resilience

**Program under the SCF:** Pilot Program for Climate Resilience

**Name of the reviewer:** Camille Bann

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### **Part I: General criteria**

This section comments on whether Mozambique's Strategic Program for Climate Resilience (SPCR) complies with the general criteria indicated in Annex A of the "Proposal for the preparation of independent technical reviews of Strategic Climate Fund (SCF) investment plans and programs".

#### ***Does the SPCR comply with the principles, objectives and criteria of the relevant program as specified in the design documents and programming modalities?***

Mozambique's SPCR does comply with the Pilot Program on Climate Resilience (PPCR) program principles, objectives and criteria<sup>1</sup>. Mozambique is one of the poorest countries in the world and extremely vulnerable to climate change. Its SPCR is designed to achieve the high level objective of *mainstreaming* climate resilience into development through three complementary components (referred to as 'pillars' of the SPCR in the investment plan) - program management and technical assistance<sup>2</sup>, pilot investments and institutional and policy reform.

The proposed pilot investments cover four key sectors - agriculture, transport (rural roads), urban (coastal cities) and natural resources (watershed management and forestry). The plan aims to encourage private investment in climate resilience in agriculture and forestry through, for example, the provision of credit from Mozambican banks. While the program's breadth and diversity means that a number of important climate risks and impacts will be addressed and a range of key government departments/ministries will be brought into the process care must be taken to ensure sufficient resources, expertise and data/scientific evidence are available to successfully deliver across the program.

The program is country led having been developed by the Government of Mozambique following two and a half years of stakeholder consultation (see Annex 1 of the SPCR). It has been designed within the broader context of sustainable development and poverty reduction, and builds on existing work, in particular the National Institute of Disaster Management (INGC) Phase 1 study, the National Action Program for Adaptation (NAPA) and the World Bank's study on the economics of climate change.

#### ***Does the plan take into account the country capacity to implement the plan?***

Capacity building activities are included under the program management and technical assistance pillar of the SPCR. The SPCR states that capacity building will focus on one productive sector (e.g. agriculture), one social sector (e.g. health) and provinces of the Limpopo and Zambezi valleys. The capacity building requirements will be developed in detail in Phase 2. The SPCR intends to complement and support other projects and programs that include capacity-building components such as initiatives undertaken by the Ministry of Coordination of Environmental Affairs (MICOA) and supported by the Africa Adaptation Program (AAP) and the Department of International Development (DFID). Capacity building is to be incorporated into all technical assistance and investment sub-components. Some detail is provided for project 2, where it is proposed to set up a coordinating unit within central government to support and build the capacity of municipalities, who will be responsible for component 2 of this project, with respect to fiduciary, safeguard and technical issues. However the SPCR does not present an overview/scoping of the capacity gaps and priority needs.

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<sup>1</sup> These are set out in 'PPCR Programming and Financing Modalities' Climate Investment Funds, April 2009

<sup>2</sup> Program management and technical assistance covers management and co-ordination, monitoring and evaluation, monitoring frameworks, knowledge management, evidence building and capacity building.

### ***Is the plan developed on the basis of sound technical assessments?***

The plan is based on the best available information, but acknowledges that there are gaps and uncertainties in the current evidence base. Technical assistance support will address key sectors and issues where further evidence is needed to identify adaptation options and investment needs. Some Phase 1 activities will be undertaken in tandem with Phase 2 and will further inform the development of Phase 2<sup>3</sup>. The overlap between Phase 1 and Phase 2 activities needs to be clearer in the SPCR (e.g., timeframe, links to proposed Phase 2 pilot projects and anticipated impact on investment portfolio).

For investment projects 7a, b and c, co-funded by the International Finance Corporation (IFC), scientific studies will be needed to understand the ecosystem services provided by forests and generate the biophysical data that underpins the development of Payments for Ecosystem services (PES) and Reducing Emissions from Degradation and Deforestation (REDD) mechanisms. It is understood that this will be considered in the further design of these projects and through IFC's extensive due diligence procedures prior to approval and funding.

### ***Does the plan demonstrate how it will initiate a transformative impact?***

It is anticipated that the plan will play a catalytic role in promoting climate-resilient growth strategies by scaling up the pilot investments, which are focused in priority areas and sectors, and by providing the flexibility to develop and explore new approaches, which is not currently a focus of other donor funding.

A number of the pilot projects describe how they could be transformational – for example, the identification of low cost and sustainable engineering solutions for improving the climate resilience of rural roads could have a transformative impact on the way in which limited funds are utilized. For pilot project 3 PPCR support would be *transformational* by promoting the institutional coordination between the National Water Department (DNA), the National Meteorological Institute (INAM), the Agronomic Investigation Institute of Mozambique (IIAM) and INGC, promoting the use of hydro-meteorological information in planning and strategic frameworks across economic sectors, and piloting integrated hydro-meteorological systems in two basins that can then be adopted at a national scale. It is understood that further evidence of how the investment plan will initiate a transformative impact will be provided in the final version of the SPCR.

### ***Does the plan provide for prioritization of investments, stakeholder consultation and engagement, adequate capturing and dissemination of lessons learned, and monitoring and evaluation and links to the results framework?***

The prioritization of investments is discussed in Section II.

The development of the SPCR has involved an extensive **stakeholder consultation and engagement** process (see Annex 1 of SPCR). Further internal government reviews and consultations with international development partners and civil society groups are planned for Phase 2 of SPCR, including detailed consultations on the geographical focal areas selected for support.

**Knowledge management** is a sub-component under the SPCR's program management and technical assistance pillar and will include the detailed design and implementation of measures to disseminate, discuss and mainstream relevant studies and pilot experience on climate adaptation. This will include exploring the role national knowledge-sharing mechanisms and institutions can play in the process such as the Climate and Disaster Risk Management Research Center (CICLAR) (a venture between the University of Eduardo Mondlane (UEM) and INGC) and linkages with global knowledge mechanisms and networks, such as the Africa Adaptation Program and the DFID-supported Climate Development Knowledge Network (CDKN). Mechanisms and budgets will be identified to ensure that analytical products, lessons and experience are shared across national and international partners. The importance of regional dissemination is noted, particularly within the Southern African Development Community (SADC), given the trans-boundary nature of water and natural resource management issue. This area will need to be developed in Phase 2 to specify the

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<sup>3</sup> Ongoing Phase 1 activities are detailed in paragraph 46 of the SPCR.

budget allocated to knowledge management across each component of the plan and to detail effective and creative dissemination tools.

**Monitoring and evaluation framework** for the SPCR portfolio will be developed in Phase 2. The current draft does not include a results framework, however key results are presented in the summary section along with success indicators.

***Does the plan adequately address social and environmental issues including gender?***

**Social issue** are referred to throughout the plan. For example, the plan highlights the importance of road infrastructure for health and education, agriculture productivity for health and livelihoods, and the management of natural resources for livelihoods (through the maintenance of natural capital that underpins economically productive process and presents new funding opportunities). The SPCR discusses the relationship between environmental factors, climate and children's health.

During the SPCR consultation process a number of stakeholders emphasized the need to strengthen **gender issues** and gender is now well covered in the plan. The impact on women has been taken into consideration in the design of all the proposed investment projects. For example, climate resilient roads will facilitate access to health centers during and after major climatic events, which is especially important for pregnant women. In agriculture, women primarily grow crops for household food security and thus are the main targets of projects building resilience in this sector. Furthermore, in 2010 the Government of Mozambique approved the Gender, Environment and Climate Change Strategy and Action Plan thus demonstrating a strong commitment to gender issues on which the SPCR can build.

In terms of **environmental issues** the SPCR states that the impact of climate change on natural resource has not yet been assessed. However, in recognition of the links between well managed natural resources, sustainable development and (cost-effective) climate resilience opportunities a number of the pilot projects have an environmental focus. For example Project 4 is aimed at promoting climate resilient livelihoods through community-based watershed/landscape management approaches. In addition the SPCR presents three options under project 7 related to natural resource management and improvements to local livelihoods.

***Does the SPCR support new investments or funding in additional to on-going/planned MDB investments?***

The requested SPCR amount is US\$100 million, and is associated with co-financing totaling to US\$250 million. In most cases, proposed investments have been designed to blend with existing or pipeline investments of the World Bank and African Development Bank (AfDB). This will enable the mainstreaming of SPCR funds into larger investment projects, thus achieving economies of scale and reducing overall transaction costs during processing and implementation. Such investments should therefore be cost-effective.

The IFC co-financed projects (project 6 and 7a, b, c) are relatively less detailed due to the shorter time frame over which these projects have been developed and the fact that the IFC do not have on-going initiatives in Mozambique on which they can build. These projects are particularly innovative in terms of climate change adaptation (for example, they include looking at new financing mechanisms such as PES and REDD) and have a strong private sector focus (they are designed to attract 50% of matching finance from the private sector). These projects, once developed, will need to be approved against the IFC's investment criteria; a key requirement is that that they are commercially viable. The three options under project 7 are in total estimated to cost US\$15million in SPCR contributions. However, the summary cost table (page viii of the SPCR) allocates only US\$5million to project 7, and so a clarification as to how many of these options will be funded under the SPCR is required.

In Phase 2 additional studies will also be undertaken of impacts and adaption options in the health sector and on exploring options for addressing climate resilience in social protection policy. Development of the evidence base in these areas could encourage interventions by other organizations and funders. It is understood that these studies will be financed under the project management budget line. Greater clarity on the budget provision to Phase 1 and Phase 2 studies is recommended.

### ***Does the SPCR take into account institutional arrangements and coordination?***

The SPCR states that the Government of Mozambique (GoM) currently lacks many of the components of a national institutional framework necessary for developing effective national and sectoral policies and plans for addressing climate change. There is no nationally agreed, cross-sectoral climate change strategy and legal provisions for addressing climate change are at an early stage of development. Responsibilities across government departments on climate change planning and policy are not well defined and legal and regulatory provisions are fragmented. Discussions on institutional arrangements for addressing climate change are ongoing within government and considerable additional investment is deemed necessary to build effective sector plans, technical skills and implementation capacity.

The SPCR recognizes the importance of institutional strengthening and to support efforts to put in place an effective institutional framework for climate change a Development Policy Operation (DPO) is proposed. A series of two DPOs for US\$50 million each is envisaged over 4 years. These operations would support, for example, the development of a national climate change strategy, national institutional framework and sectoral strategies and action plans. DPO-supported policy reforms will complement the portfolio of sub-project investments financed by the SPCR and will help the scaling-up of successful approaches to national level. Technical assistance and perhaps other development partners will support the proposed operation.

The SPCR recognises the need to ensure that support for climate resilient planning is targeted appropriately at district and local levels in line with Mozambique's 'decentralization' and 'de-concentration' process, whereby responsibilities will be increasingly delegated to district and municipal authorities.

It is envisioned that eventually a high level steering committee will be required to ensure that policy development is coordinated across government and that appropriate plans, budget allocations, implementation and reporting arrangements are put in place. The SPCR outlines the current arrangements and a possible future institutional framework (see Section 6 of the SPCR)

### ***Does the SPCR promote poverty reduction?***

More than 50 per cent of Mozambique's population lives below the absolute poverty level and the incidence of rural poverty is particularly high. Many rural households are dependent on subsistence agriculture and around one third of Mozambique's population is food insecure. Agriculture is also a major contributor to the economy and employer. In addition rural households are vulnerable to natural disasters. Therefore actions in rural areas targeted at improving the resilience of agriculture to climate change should promote poverty reduction. These issues are addressed in a number of the pilot projects. The lack of infrastructure also contributes to high poverty rates. Improving the country's road system will help ensure access of rural communities to health and education services and markets (pilot project 1). The SPCR also aims to strengthen environmental management to support sustainable rural livelihoods.

### ***Does the SPCR consider the cost effectiveness of investments?***

There is little analysis of the cost effectiveness of the pilot investments. The costings are at this stage indicative (this is consistent with the SPCR programming and financing modalities which state costing should be 'notional'). The lack of specific costing for the investments makes a detailed cost-effective analysis difficult at this stage.

However, some high level economic analysis is provided. For example, the SPCR states that the proposed investment to improve the climate resilience of Mozambique's roads will be cost-effective. It is estimated that a long-term program of paving rural roads would cost upwards of US\$3 billion, while support from the SPCR can be used to identify and pilot sustainable low-cost engineering solutions.

## **Part II: Compliance with the investment criteria or business model of the PPCR program.**

***Climate risk assessment: Has the SPCR been developed on the basis of available information on the assessment of the key climate impacts in the country; the vulnerabilities in all relevant sectors, populations and ecosystems; and the economic, social and ecological implications of climate change impacts?***

The SPCR draws together the available projections of climate change and their impact on different economic sectors and segments of the population. While there is much uncertainty, based on available information increasing climate and weather variability is likely. Rainfall is suspected to be extremely variable in the future and an increase in the frequency of extreme weather events such as floods and drought is anticipated. An analysis of Maputo's (incomplete) sea level record indicates a rise of 2.17mm/year - plus or minus 0.76mm. Any sea level rise is likely to have negative implications for low-lying areas where 60 per cent of Mozambique's population lives. The World Bank modelled the impact of four International Panel for Climate Change (IPCC) scenarios and estimated that Gross Domestic Product (GDP) would fall between 4% and 14%, relative to the baseline in 2040-50, if adaptation strategies are not implemented.

Mozambique is the third ranked African country in terms of exposure to risks from weather-related hazards (drought, floods and tropical cyclones). The human and economy impact of weather-related hazards is well documented in the SPCR. The INGC synthesis report warns that "*the exposure of Mozambique to natural disaster risk will increase significantly over the coming 20 years and beyond, as a result of climate change*". Subsequent analysis undertaken by the World Bank shows that rain-fed agriculture, coastal towns and transport infrastructure are sectors that are particularly vulnerable climate change. However, the impacts of climate change on several sectors have not yet been assessed adequately – including the health sector and on natural resources (e.g., fisheries and forests). Mozambique is amongst the 10 nations most affected by malaria. Warmer temperatures and an increase in flood events are likely to increase the incidence of malaria, while droughts are often associated with water-borne diseases, including cholera. The high dependence of Mozambique on shared water resources is an important factor - upstream rainfall reductions in Zimbabwe and Zambia could translate into significant reductions in river flows in Mozambique. Further work is needed to elaborate the potential impact of climate change on water resources.

***Institutions/ co-ordination: Does the SPCR specify the coordination arrangements to address climate change: cross-sectoral; between levels of government; and including other relevant actors (e.g., private sector, civil society, academia, donors, etc).***

It is proposed that Phase 2 of the program is managed by a national level Program Coordination Unit, co-hosted by MPD and MICOA and supervised by the World Bank. MPD will help ensure that knowledge and learning from pilot investments and studies are shared and mainstreamed into the planning of sector line ministries, provinces and districts. MICOA will help ensure that activities support a planned national climate change program and are coordinated with other climate-related international donor support initiatives. It is anticipated that the unit will also be responsible for coordinating with the planned DPO support.

The private sector is involved in a number of the proposed pilot projects and the UEM is expected to play a part in knowledge dissemination. Consistent with the recommendations of stakeholder consultations – a participatory and consultative process will continue as part of the Strategic Environmental and Social Assessment (SESA) being undertaken under Phase 1 and subsequently as part of detailed project design of investment projects. However the mechanics of this consultation across private sector, civil society, academia and donors is not elaborated upon in the SPCR.

***Prioritization: Has the SPCR adequately prioritized activities taking into account relevant climate/risks and vulnerabilities and development priorities, sectoral policies; ongoing policy reform processes and existing, relevant activities and strategies.***

The pilot projects have been selected based on existing evidence of the sectors most vulnerable to climate change. The National Adaptation Program of Action (NAPA) identifies four priority areas – strengthening early warning systems, strengthening the capacity of farmers to deal with climate change, reductions of the impacts of climate change along the coastal zone, water resources

management. The World Bank study identified roads, agriculture and coastal infrastructure as priority sectors for support. As mentioned above, this study did not cover natural assets (such as fisheries and forests), health or urban issues. The Institute of Disaster Management (INGC) Phase I study focused on a substantial subset of Mozambique's disaster prone areas and how their vulnerability might be affected by climate change. The agricultural sector stands out in this analysis as particularly vulnerable.

While it is acknowledged that further work using vulnerability mapping is needed to better identify priority areas for investment, the SPCR states that some geographical priorities for early action can already be identified. The pilot investments are therefore focused on: (i) the city of Beira – the second most populous urban area in Mozambique, which is extremely vulnerable to coastal storms, cyclones and sea level rise; (ii) the productive agricultural lowlands along the Zambezi and Limpopo river corridors; and (iii) the semi-arid drylands of Gaza, where the effects of drought on agricultural production and livelihoods are already evident.

As part of the investment plan development a review of existing initiatives was undertaken – covering existing and proposed strategic plans for climate change, studies and programs (see Section 3 of the SPCR). There is a proposal put forward by INGC and MICOA to develop a national climate change strategy, and a draft national 'Program Assistance to Climate Change'. INGC has recently prepared an US\$5million Disaster Risk Management Plan - aimed at building policy, strategies and institutions; identifying, assessing and monitoring risk; and reducing underlying risk factors. The SPCR is working to ensure that the SESA are coordinated with the SPCR teams. While a narrative on existing climate change initiatives is provided, the plan would benefit from a statement aligning the proposed SPCR activities with Mozambique's development and poverty reduction goals and sector strategies.

### **Part III: Recommendations**

- Outline at the strategic level capacity constraints and priority needs. This will inform the analysis of capacity constraints to be undertaken at the project level in Phase 2 and will be linked to an understanding of data and information requirements to successfully execute the pilot investments and the capacity to generate this information in the proposed timeframe.
- Clarify the links between Phase 1 and Phase 2 (e.g., timeframe, how Phase 1 activities link to proposed Phase 2 pilot projects and their anticipated impact on the proposed investment portfolio), and the budget provision for Phase 1 and Phase 2 studies.
- Develop logical / results framework.
- Develop information on baseline and indicators and risks for the proposed investments projects. In some cases information on these is missing. From a program management perspective it would also be good to highlight how risks might be mitigated.
- Clarify funding for the IFC projects and the process for developing these project proposals.
- Define the steps and mechanisms for consulting across the private sector, civil society, academia and donors.
- Discuss how existing initiatives will be built on by the SPCR and how the plan aligns with Mozambique's development and poverty reduction goals and sector strategies.
- The plan would benefit from an analysis of the risks of climate change to the private sector.