Climate Resilience and Economic Development

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Ministry of Finance
Country Context: Zambia at a Glance

Population 13 million
61% rural
Land: 750,000 km²
Two large river basins: Zambezi and Congo
The name is derived from river Zambezi

Strong Economic Growth…
GNI per capita: US$1,280/year
GDP Growth: 6.4%

But Growth is Uneven…
Poverty level in rural areas: 77%
(59% at national level)
UN HDI: 150 out of 169
Climate Change poses major Development Challenges for Zambia

- Over past 30 years, floods and droughts have cost Zambia US$13.8 billion – equivalent to 0.4% of annual GDP growth
- In the absence of adaptation, rainfall variability could keep an additional 300,000 more Zambians below the poverty line
- Climate variability could cost Zambia US$4.3 billion in lost GDP over the next decade, reducing annual growth by 0.9%
The Trends (1960-present)

- Net trend towards more floods and droughts
- Mean temperature increased by 1.3 °C since 1960
- Number of hot days and nights has increased
- Mean rainfall has decreased by 2.3% per decade
Projected Future Trends

Temperature projected to rise by 3-5° C by 2100
Average precipitation not projected to change significantly; however
Precipitation variability expected to increase: early rainy season to become drier, peak rainy season with heavier rainfall periods.
Climate extremes to accentuate: more intense floods; more frequent droughts.
Zambia: Major Exposure to Climate

Food Needs Areas – 2005/06 Drought

The Southern part of Zambia is generally considered to be the most vulnerable.
Impact on the Most Vulnerable

Women-headed Households, the Elderly, Incapacitated, and those taking care of AIDS-orphans are most vulnerable. Single or divorced male-headed HHs are also highly vulnerable (due to malnutrition).

When hit with floods or droughts, vulnerable HHs cope by reducing food or essential expenditures (health, education). They also increase their level of indebtedness and rely further on casual labor – however, this is mostly food-for-works which is similarly impacted by the weather.

Many traditional coping mechanisms (e.g. indigenous early warning, two house system) are no longer working due to weather unpredictability and changing economic conditions.
Due to high vulnerability, the Barotse and Kafue Sub-Basins of the Zambezi have been chosen as focal areas for SPCR interventions. They comprise 24 districts, and a potential population of 3.8 million.
PPCR Objective

To mainstream climate change into the most economically and vulnerable sectors of the economy in order to ensure sustainable economic development towards the attainment of Zambia’s Vision 2030.
Zambia’s Climate Change Programme Institutional Arrangements

The main themes of the programme are supported by stakeholder platforms.
Over 40 institutions and agencies are interested and/or involved in Zambia’s new Climate Change Programme.

Stakeholders are grouped into Platforms according to their area of interest, e.g.

- Climate information (right)
- Climate resilient agriculture
- Climate resilient infrastructure

This includes Government agencies, NGOs, academia and private sector.
The Green Boxes show how the SPCR fits into the main themes of Zambia’s National Climate Change Program
The Three Investment Projects were Designed to Optimize Comparative Advantages

This also Ensures that activities are Integrated at National and Sub-Basin Levels

### THE THREE INVESTMENT PROJECTS

#### Investment Project 1 (IBRD)

- Strategic (Public) Program Support

#### Investment Project 2 (AfDB)

- Barotse Sub-Basin Pilot:
  - Participatory Adaptation
  - Climate Resilient Infrastructure

#### Investment Project 3 (IFC)

- Private Sector Support

- Kafue Sub-Basin Pilot:
  - Participatory Adaptation
  - Climate Resilient Infrastructure
1. PARTICIPATORY ADAPTATION

1. Climate resilience will be mainstreamed into Integrated Development Plans and Local Area Plans

2. The SPCR will disburse an increment of 30% as an incentive for local plans to become climate resilient

3. Communities would be assisted by qualified NGOs and technical platforms

4. It is hoped that this model could be upscaled to national level
1. PARTICIPATORY ADAPTATION (Examples)

<table>
<thead>
<tr>
<th>Current Plans now include:</th>
<th>Climate Resilient Plans would also include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Government baseline</td>
<td>+ 30% increment</td>
</tr>
<tr>
<td>Livestock and poultry rearing</td>
<td>Climate resilient agriculture, livestock and fisheries</td>
</tr>
<tr>
<td>Agriculture inputs</td>
<td>Natural resources management</td>
</tr>
<tr>
<td>Wells, water supply systems</td>
<td>Water harvesting, flood control</td>
</tr>
<tr>
<td>Education and health facilities</td>
<td>Retrofitting/construction to climate resilient standards</td>
</tr>
<tr>
<td>Feeder community roads</td>
<td>Upgrading or retrofitting to climate resilient standards</td>
</tr>
<tr>
<td>Community facilities</td>
<td>Community preparedness</td>
</tr>
</tbody>
</table>

This would promote community-driven, climate resilient development based on decentralized budget processes.
2. CLIMATE RESILIENT INFRASTRUCTURE

All-weather access from Victoria Falls to Kafue National Park

This component would select highly visible infrastructure to demonstrate the benefits of climate resilient interventions.

Proposed SPCR funding 25-56% of infrastructure upgrading costs

Improved management of canals in Barotse
2. CLIMATE RESILIENT INFRASTRUCTURE (Cont’d)

The SPCR would help review design standards and codes of practice for transport infrastructure. Once adopted, these revised standards would be incorporated into EIA requirements.

Innovative procurement methods (such as Asset Management and Performance based contracting) would also be explored.

In Barotse, O&M mechanisms would be reinforced following close consultation with the Barotse Royal Establishment.

- Improve roads’ resistance to floods and heat
- Improved management of canals used for transportation, drainage
- Improved management of canals used for transportation, drainage
3. STRATEGIC PROGRAMME SUPPORT MAINSTREAMING

Mainstreaming into Key Sectors would continue through the SPCR

The Zambia Civil Society Network is collaborating with Ministry of Finance and National Planning in a tracking tool designed to monitor increase in climate-related expenditures amongst key sectors.

<table>
<thead>
<tr>
<th>Sector</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>54.0</td>
<td>68.7</td>
<td>73.5</td>
<td>65.2</td>
<td>23.7</td>
</tr>
<tr>
<td>Environment and Natural Resources</td>
<td>40.0</td>
<td>17.4</td>
<td>24.6</td>
<td>23.4</td>
<td>22.4</td>
</tr>
<tr>
<td>Energy and Water</td>
<td>14.7</td>
<td>16.0</td>
<td>10.9</td>
<td>15.9</td>
<td>15.6</td>
</tr>
</tbody>
</table>

Infrastructure:

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Works and Supply</td>
<td>0</td>
<td>16.5</td>
<td>0.2</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Communications and Transport</td>
<td>2.9</td>
<td>3.7</td>
<td>1.3</td>
<td>4.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Disaster Management</td>
<td>4.0</td>
<td>3.7</td>
<td>3.6</td>
<td>2.4</td>
<td>35.8</td>
</tr>
<tr>
<td>TOTAL Above Sectors</td>
<td>115.5</td>
<td>126.0</td>
<td>114.2</td>
<td>111.7</td>
<td>101.4</td>
</tr>
</tbody>
</table>

Real term allocations to climate-resilient programmes (2007-2011)

By the conclusion of the SPCR, Zambia aims to increase allocations to climate-resilient programmes by 25% in real terms.
3. STRATEGIC PROGRAMME SUPPORT
KNOWLEDGE MANAGEMENT AND CAPACITY BUILDING

Investing in National Champions

A National Program needs to invest in future leaders. The SPCR will target highly committed champions to foster their inks with international centers of excellence and promote lessons learned.

Zambian’ champions have already formed RhOK Zambia, a Google group forum by which they exchange experiences and interactions.
3. STRATEGIC PROGRAMME SUPPORT
CLIMATE RISK FINANCING

Under the SPCR, Zambia will study how to best harmonize and use efficiently climate risk financing, building and improving on the experiences of existing funds, such as:

- Disaster Management and Mitigation Unit Contingency Fund
- Roads Emergency Fund
- Green Knowledge Institute (ran by the African Carbon Credit Exchange)
- Environmental Fund (interim)
Strengthen the early warning system by integrating indigenous with scientific knowledge...

And upgrading critical gaps on the hydro-meteorological information network
3. STRATEGIC PROGRAMME SUPPORT
CLIMATE INFORMATION (Cont’d)

INNOVATIONS:

Introduction of CROWDSOURCING to improve two-way climate information flow with users

Crowdsourcing enables a large number of partners to be involved in information exchange

It can be crucial during extreme events

Examples:
Ushahidi
FrontlineSMS
Open Street Map

FrontlineSMS, for example, allows communities to SMS information by reversing charges
3. STRATEGIC PROGRAMME SUPPORT
PRIVATE SECTOR SUPPORT

PROPOSED INNOVATIONS:

• Introduction of mobile-phone platform for price and weather information to pilot farmers

• Promotion of private-sector led appropriate technologies (e.g. improved water use)

www.esoko.com
3. STRATEGIC PROGRAMME SUPPORT
PRIVATE SECTOR SUPPORT (Cont’d)

- **Index-weather insurance** (building on Malawi experience)
- **Micro-finance support in the two pilot sub-basins**
As a condition for eligibility, at least 50% of the activities funded under climate resilient plans will be targeted to socially vulnerable groups – women-headed households, elderly, and the incapacitated.

This pre-targeting would be mapped through a Comprehensive Vulnerability Assessment and Analysis, as per standard guidelines of the Disaster Management and Mitigation Unit.

Youth groups would also be targeted due to their access to sub-standard land (typically away from irrigated areas).

In districts with active cash (child) transfers, the SPCR would link with the social protection program for complementary support (through social infrastructure, micro-credit, and assistance to producer groups).
PPCR I-- Lessons Learnt:

- **Awareness and Information Dissemination:** Policy-makers, parliamentarians, and other decision makers, when informed and sensitized, can help build the institutional framework for a national climate change agenda.

- **Multi-Sectoral Collaboration:** Strengthening cross sectoral collaboration is not easy, but ultimately it can provide multiple benefits – in the form of complementary expertise, economies of scale, avoidance of duplication, and fostering opportunities to complement funds and activities on the ground.

- **Strengthening institutional coordination** is slowly empowering Zambia to access climate change funds from multiple sources.

- **Investing in National Champions.** Identifying, training and investing in national champions is critical to the long-term sustainability of a climate change program.
PPCR I Lessons Learnt

- **Mainstreaming needs to be done in a processes that matter:** The mainstreaming of climate resilience into the Sixth National Development Plan (SNDP) not only helped Zambia identify risks and opportunities resulting from climate change, but gave staff from Line Ministries a mandate to work on specific climate change programs within their sector, as the SNDP is tied to the budget. The same leverage is not achieved through stand-alone documents such as the NAPA, which have no direct ties to the budget.

- **The Role of Partnerships:** from the early days, PPCR helped involve multiple partners in joint workshops and field visits. This included not only staff from various line Ministries, but also representatives of civil society, youth groups, academic institutions, and other contributing partners. This process helped achieve consensus on the priority investments proposed for Phase II, but also enabled stakeholders that normally would work in sectoral or project silos to get to know each other, and complement their roles in the field.

- Micro-finance support in the two pilot sub-basins
PPCR I Lessons Learnt

- **Participatory Process**: Leadership by the Government in key missions and engagement of traditional and local authorities gave legitimacy and acceptability to the ultimate design of Phase II.

- **Active collaboration between the Government and MDBs** – active, day-to-day collaboration between the Government and MDBs (both through Phase I as well as through the Project Preparation Grant) facilitated agreement on a common framework for all PPCR projects, and helped the Secretariat at the time when capacity was still weak.
Key Challenges

• The deployment of attached sectoral staff to the Secretariat has been slow. This is in part due to concerns about salary incentives, and of losing the career advancement opportunities provided by line Ministries.

• Clarification of lead institutional mandates
  Common to other countries, there have been disagreements on which Ministry should lead climate change in Zambia. Past experience, however, shows that external interference by donors or excessive pressure to expedite the agreement can easily backfire. With the establishment of the Secretariat, the process of national consensus needs now to be allowed to reach its course, and be properly supported by the Climate Change Strategy and Policy (which are being finalized).
KEY CHALLENGES

• **Harmonization of procedures.** Harmonization of Government and MDB procedures (specifically AfDB and World Bank’s) has been difficult and slow, particularly in procurement and safeguards. Delays continue to affect key contracts, due to the need to obtain tripartite clearances;

• **Involvement of NGOs.** NGOs have been active partners of the PPCR since its inception. However, the planned contracting of an umbrella national NGO to facilitate sensitization has yet to materialize, in part due to the Tender Committees lack of familiarity with NGO partnerships (should they be treated as contractors? Is there justification for single sourcing?).
KEY CHALLENGES

• **Consultants’ Skills.** Climate resilience is a relatively new and specialized field, and much of the knowledge lies with individual experts, academic institutions and (increasingly) private sector and civil society organizations.

• This does not lead itself easily to the cost and quality based selection typically promoted by MDBs, which tends to attract large, unspecialized firms.

• In part as a result of this, contract management under Phase I has not been easy for the Secretariat or for the MDBs.

• This is also made more difficult by the time that it requires to assemble multi-sectoral and multi-stakeholder evaluation committees.
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