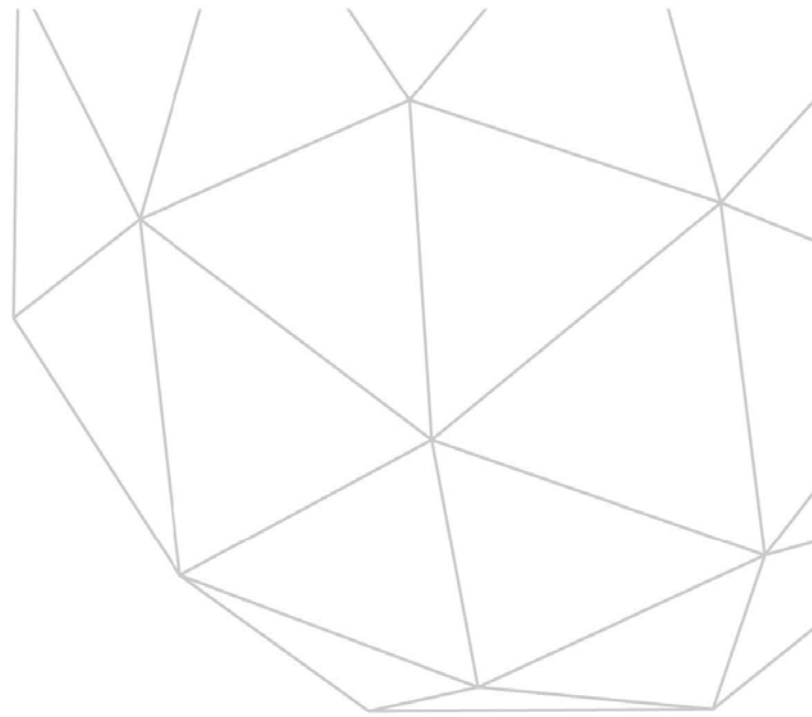




GREEN
CLIMATE
FUND



Concept Note

The Green Climate Fund (GCF) is seeking high-quality projects or programmes.

Accredited entities may choose to submit a concept note, in consultation with the relevant national designated authority, to present the proposed project or programme idea in order to receive early feedback and recommendation.

PROJECT / PROGRAMME CONCEPT NOTE

GREEN CLIMATE FUND | PAGE 1 OF 5

Please submit the completed form to fundingproposal@gcfund.org¹

A. Project / Programme Information	
A.1. Project / title	Southern Africa Water Security Programme
A.2. Project/ programme	Project
A.3. Country	Zimbabwe and Mozambique
A.4. National designated authority(ies)	<p>Zimbabwe Mr. Washington Zhakata, Director – Climate Change Management Department Ministry of Environment, Water & Climate. 11th Floor, Kaguvi Building, Corner 4th Street/Central Avenue, Harare, Zimbabwe Tel. + 263 4 701681/3 and +263 773 069 438 E-mail: climatechange@environment.gov.zw and washingtonzhakata@gmail.com</p> <p>Mozambique Mrs. Marilia Telma Antonio Manjate Ministry of Land, Environment and Rural Development. Av. Acordos de Lusaka, 2115, Maputo, P. Box 2020, Mozambique E-mail: telma.manjate12@gmail.com Tel. +258 823 286210</p>
A.5. Accredited entity	Not yet confirmed – considering KfW, UNDP, UNEP
A.6. Executing entity / beneficiary	<p>Executing Entity: ARA-Centro in Beira, Mozambique, ZINWA Runde in Masvingo and ZINWA Save in Mutare, Zimbabwe</p> <p>Beneficiary: TBC</p>
A.7. Access modality	Direct <input type="checkbox"/> International X
A.8. Project size category (total investment, million USD)	Micro (≤ 10) X Small ($10 < x \leq 50$) <input type="checkbox"/> Medium ($50 < x \leq 250$) X Large (> 250) <input type="checkbox"/>
A.9. Mitigation / adaptation focus	Mitigation X Adaptation X Cross-cutting <input type="checkbox"/>
A.10. Public or private	Public
A.11. Results areas (mark all that apply)	<p><i>Which of the following targeted results areas does the proposed project/programme address?</i></p> <p>Reduced emissions from:</p> <p>X Energy access and power generation (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)</p> <p><input type="checkbox"/> Low emission transport (E.g. high-speed rail, rapid bus system, etc.)</p> <p><input type="checkbox"/> Buildings, cities, industries and appliances (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)</p> <p>X Forestry and land use (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)</p>

¹ Please use the following naming convention for the file name: “[CN]-[Agency short name]-[Date]-[Serial number]” (e.g. CN-ABC-20150101-1).

	<p>Increased resilience of:</p> <ul style="list-style-type: none"> X Most vulnerable people and communities (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.) X Health and well-being, and food and water security (E.g. climate-resilient crops, efficient irrigation systems, etc.) X Infrastructure and built environment (E.g. sea walls, resilient road networks, etc.) X Ecosystems and ecosystem services (E.g. ecosystem conservation and management, ecotourism, etc.)
A.12. Project / programme life span	6 years
A.13. Estimated implementation start and end date	<p>Start: Jan 2016</p> <p>End: Jan 2022</p>

B. Project/Programme Details

The Fund requires the following preliminary information in order to promptly assess the eligibility of project/programme investment. These requirements may vary depending on the nature of the project/programme.

<p>B.1. Project / programme description (including objectives)</p>	<p>The Southern Africa Water Security Programme is intended to increase climate resilience through improved water, food and energy security. The programme will build climate resilience among highly vulnerable, food insecure rural communities living in southern African states by supporting: 1) the rehabilitation of degraded habitats and protection of critical transboundary water resources; 2) the development and rehabilitation of small scale water resource infrastructure able to withstand climate change; and 3) the increased adaptive capacity of vulnerable groups. Initially, interventions will focus on three transboundary projects in Zimbabwe and Mozambique and the programme will then be scaled up to include other southern African states. The programme will be co-financed by DFID's CRIDF small-scale infrastructure programme in Southern Africa.</p> <p>Across the Southern African region, climate observations show an increase in temperatures, especially minimum temperatures. According to the Fifth IPCC Assessment Report, temperatures in the region have risen by over 0.5°C over the last 100 years (with the most significant warming occurring during the last 2 decades) with minimum temperatures increasing more rapidly relative to maximum temperatures over inland southern Africa. The region's climate is expected to become hotter and drier with a further increase in mean temperatures between 2°C and 4.5°C in the next 50 to 100 years. Across southern Africa, warmer temperatures are expected to affect natural ecosystems and agricultural crops with adverse impacts on the productivity of rangeland and food production.</p> <p>Overall, since 1950, the region has also witnessed a downward trend in rainfall. There is a lack sufficient observational data on southern Africa to draw firm conclusions about trends in annual precipitation over the past century. However, where data are available these suggest that the region has experienced a downward trend in rainfall and frequent droughts. The IPCC Fifth Assessment Report indicates that there is <i>medium confidence</i> that droughts will intensify in the 21st century in some seasons, due to reduced precipitation and/or increased evapotranspiration. Drier winters are projected over a large area in southern Africa by the end of the century and declining rainfall is also projected during austral spring months. Precipitation patterns are also expected to change in intensity and frequency, resulting in more extreme events and longer periods between rainfall. Apart from changes in total or mean summer rainfall, certain intra-seasonal characteristics of seasonal rainfall such as onset, duration, dry spell frequencies, and rainfall intensity as well as delay of</p>
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rainfall onset have changed.

Extreme weather events have already resulted in the loss of life, illness, and crop losses and damage to other assets. An increase in the frequency of cyclone activity in the South West Indian Ocean region is associated with flooding in countries on the eastern side of the SADC region. Heavy floods displaced more than a million people in southern Africa in 2007 and in 2013, the eastern coastal part of the region was flooded three times more than normal. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. Longer-term effects include increases in the price of staple foods, a reduction in food security, malnourishment, malnutrition and stunting in children, as well as lower educational attainment.

Vulnerability to climate change varies across the southern Africa region and is influenced by a range of social, economic and other environmental factors that interact with climate change. Southern Africa is highly susceptible to climate change due to growing populations, a high prevalence of poverty, malnutrition, urbanisation, land degradation and pollution which combine with climate change to compromise the region's ability to provide food, water and energy security to its populations as well as to achieve its development potential. Climate change impacts are projected to slow down economic growth, make poverty reduction more difficult, further erode food security and prolong existing and create new poverty traps, the latter particularly in urban areas and emerging hotspots of hunger.

The agricultural and water sectors are particularly vulnerable to climate impacts. Water resources are subjected to high hydro-climatic variability over space and time, and are a key constraint on the continent's continued economic development. For example, adequate provision of water for livestock production is likely to become more difficult and the distribution of economically important pests in lowland and dryland areas may change. Climate change is also expected to amplify existing stress on water availability across Africa because the impacts of climate change are superimposed onto already water-stressed catchments with complex land uses and engineered water systems².

As agriculture depends on water availability and specific temperature ranges for plant growth, the sector is highly sensitive to climate change. This has severe implications for livelihoods, the availability of food and economic growth due to agriculture's significant contribution to GDP and employment in most southern African countries. Changes in the length of growing season are already leading to declining agricultural productivity with a number of countries reporting decreased crop yields (particularly cereals) due to poor rainfall resulting in increased food prices and reduced casual labour opportunities especially for poor households. Reduction of arable land, widespread shortage of water, diminishing food and fish stocks, increased flooding and prolonged droughts are already happening and leading to frequent humanitarian crises in the region. Maize-based systems are among the most vulnerable to climate change with estimated yield losses at mid-century estimated to be 18% for the region, with yield losses for South Africa and Zimbabwe in excess of 30%³ which will create an upward pressure on prices of basic cereals. Climate impacts are likely to be further aggravated by HIV/AIDS and poor adaptation. A high prevalence of vector and water-borne diseases that are influenced by climatic elements also increases vulnerability to climate change as climate change is known to be a multiplier of existing health vulnerabilities which are associated with insufficient access to safe water and improved sanitation, food insecurity, and limited access to health care and education (IPCC 2014). Building resilience to climate stresses and shocks in these key sectors is therefore critical for future growth and poverty alleviation.

The programme will build on and support existing efforts across the SADC region to enhance water, food and energy security. Climate change adaptation in the water sector is a transboundary process which requires the adjustment of societies and economies at different levels, from the grass roots up to the river basin and regional levels. At the regional level, SADC has responded to the impacts of climate change by initiating the development of a regional programme (guided by the

² IPCC Fifth Assessment Report, 2014

³ IPCC Fifth Assessment Report, 2014

report on the Southern Africa Sub-regional Framework of Climate Change Programmes) on climate change which is still in the development phase. All of the target countries have signed and ratified the Climate Change Convention (UNFCCC) and the Kyoto Protocol. The programme will support SADC listed priority projects that integrate land and water management, and disaster risk reduction, within a framework of emerging climate change risks to increase resilience to projected climate change impacts. So far CRIDF has supported the design of three transboundary projects that could be funded through the programme:

1. Supporting Climate Adaptation through community based IWRM&D in the Save Basin
2. Limpopo Climate Adaptation Project
3. Buzi River Basin Climate Resilience Fund

Project concepts and initial scoping studies are attached at Annex ** for each of these projects.

Supporting Climate Adaptation through community based IWRM&D in the Save Basin

The Supporting Climate Adaptation in the Save Basin Project is intended to increase climate resilience through the restoration of ecosystem services and improved water security for strengthened agricultural livelihoods. The project will restore ecosystems services and build climate resilience among highly vulnerable, food insecure rural communities by supporting: 1) the rehabilitation of degraded habitats and protection of critical transboundary water resources; 2) small scale water resource infrastructure developed and managed to withstand climate change; and 3) increased capacity of stakeholders to integrate adaptation into planning for water resource management to support climate resilient livelihoods.

The Save River Basin is one of three basins shared exclusively by Zimbabwe and Mozambique and is home to 3.17 million people. Water resources are critical as more than 80% of the population depends on rain fed subsistence agriculture for their livelihood⁴. However, severe drought and flood disasters result in total crop failure most years. Uncontrolled expansion of cultivation on marginal lands and river buffer zones, widespread deforestation and unplanned settlement activities in the upper and middle catchment of the Save River in Zimbabwe have led to extensive erosion and siltation of rivers, reservoirs and dams. This has led to severe flooding in the low lying areas of the basin in Mozambique. The Government of Zimbabwe has officially designated the 'Save Basin as degraded, and requiring restoration'.

Investment in water infrastructure development and habitat rehabilitation is needed to increase agricultural production. Investing in small dams, irrigation and livestock water schemes will boost water storage capacity, minimise the impacts of dry spells and droughts and reduce flood risk as well as raise agricultural productivity and alleviate poverty. The project will promote integrated water resources management to reduce climate vulnerability and to ensure that water management systems are well adapted to cope with increased climate variability (in line with SADC's climate adaptation strategy for the water sector). The project will also rehabilitate degraded areas of the watersheds identified in an initial scoping study to protect water resources and restore ecosystem services that are essential for supporting rural livelihoods in the basin especially livestock and crop production. CRIDF is currently implementing two demonstration projects in two of these districts. Additionally, more than 8 large multi-purpose dams have been identified in the Save Basin Joint IWRM Strategy. The Strategy promotes plans to prioritise one or two for implementation to supply the various small schemes throughout the basin.

The project will also build the capacity of key institutions and local communities involved in water resource development to make informed choices in adapting to climate change. As well as supporting better water resource management, the project will include interventions to increase the climate resilience of farming and livestock systems and avert future food shortages. Capacity for

⁴ The Republic of Mozambique and the Republic of Zimbabwe (2013). The Save River Basin – a shared water resource Integrated Water Resources Management Strategy.

monitoring water resources and vulnerability to climate change in the Save basin will also be developed along with support to build the adaptive capacity⁵, of people most vulnerable to climate change through the development of adaptation strategies that are appropriate to existing conditions.

Limpopo Climate Adaptation Project

The Limpopo Climate Adaptation Project is designed to support small-holders living in Matabeleland, Zimbabwe to adapt to climate change through improved water, food and energy security. The project will enhance the climate resilience of rural livelihoods by increasing water and food security of local communities through support for: 1) climate adaptation planning by communities; 2) small-scale irrigation, livestock watering and general water supplies; and 3) climate resilient livelihoods.

Matabeleland in the eastern Limpopo catchment is the driest and one of the most food insecure regions of Zimbabwe. The Matabeleland provinces, in the west and south-west of Zimbabwe, are highly prone to drought and farmers struggle with erratic rainfall which results in the failure of rain fed agriculture in two out of three years on average. The current drought is expected to cause widespread food shortages and hunger. Safety-net interventions by the government and partners are limited and lean season humanitarian assistance is expected to be lower than average due to a challenging funding situation⁶.

There is an urgent need to rehabilitate and build new small dams and irrigation schemes in the Matabeleland region to improve water security and avert future food shortages. Matabeleland is located between the Limpopo and Zambezi rivers and small dams have historically played a crucial role in small-scale irrigation, livestock watering and water supply. However, existing dams are poorly maintained and have reduced capacities as a result of siltation. The objective of the project is to reduce the vulnerability of local communities to climate change by supporting local adaptation plans, constructing and rehabilitating dams and enabling climate resilient livelihoods. The project will build awareness of climate threats and provide support to enhance local capacities for adaptation planning by re-establishing the “Give a Dam” Consortium and supporting the construction /rehabilitation of around 300 dams and irrigation schemes over a six-year period along with interventions to increase the climate resilience of farming and livestock systems and avert future food shortages. CRIDF already holds a database together with a consortium of Zimbabwe NGOs providing details and location of up 1600 dams in the south west of Zimbabwe

Buzi River Basin Climate Resilience Fund

The Buzi River Basin Small-scale Climate Resilience Fund is intended to build climate resilience of vulnerable rural communities in the Buzi River Basin by supporting small scale, community based Integrated Water Resource Management and Development (IWRM&D) initiatives. The aim is to improve the management of surface waters and support adaptive farming strategies to build climate resilience. The fund will be managed by ARA-Centro and ZINWA, the parastatal agencies responsible for managing water resources on a catchment basis in Mozambique and Zimbabwe respectively, with Technical Assistance provided by CRIDF.

The Buzi is a transboundary river basin shared between Zimbabwe and Mozambique with a catchment area of 27,700 km² of which 88% is located in Mozambique and 12% in Zimbabwe. The Buzi catchment is important for hydropower and agriculture (bananas, beans, vegetables, forestry and tea growing). There are around 1.2 million people living in the Buzi basin (projected to rise to 1.9 million by 2030), the majority of which are poor and depend on rainfed agriculture. Buzi is prone to heavy rains and flooding during the four month rainy season but also to dry spells and drought in the dry season due to water scarcity arising from poor water management and high evaporation rates. The area is also affected by overexploitation of natural resources, land degradation, soil erosion (especially in the communal lands of Zimbabwe), deforestation, invasion of water hyacinth and pollution from industry and manual labour on commercial farming estates. Institutional capacities to manage flooding, drought and actively participate in negotiations of

⁵ Defined as the ability of a system [human or natural] to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences. Intergovernmental Panel on Climate Change (IPCC) Working Group 2, 2001. Third Assessment Report, Annex B: Glossary of Terms.

⁶ Food Security Outlook for Southern Africa Zimbabwe. July 2015 to December 2015. A typically high cereal prices and reduced livelihood options lead to Stressed and Crisis outcomes.

	<p>shared water resources are weak in both countries.</p> <p>Initially, it is envisaged that US\$500,000 will be needed to capitalise the Fund and support a minimum of ten of Small Grant projects. The project is guided by the CRIDF and Pubusa Portfolio Strategies as well as experience from a similar Fund established in the Pungwe Basin (which is managed by the same institutions). CRIDF has already conducted an in-depth assessment and has created a preliminary design of a suitable fund model. An appropriate and effective governance structure, criteria for project selection, reporting mechanisms and the technical assistance requirements for fund beneficiaries in the Buzi River Basin will be developed during proposal preparation.</p>
<p>B.2. Background information on project/programme sponsor</p>	<p>Describe project/programme sponsor's operating experience in the host country or other developing countries.</p> <p>CRIDF is a DFID supported water infrastructure programme for southern Africa. Working to deliver sustainable small-scale infrastructure across 11 SADC countries, the demand-driven programme focuses on water services, water resource management, and water for livelihoods, fostering sustainable development of the region's water resources and addressing the water, food and energy nexus. CRIDF supports small-scale water infrastructure projects and facilitates access to finance for the implementation of these projects. Such interventions provide the entry point and platform for CRIDF to engage with, support and influence key SADC interventions, river basin organisations and national stakeholders. Activities are selected according to a set of CRIDF principles to ensure that investments align with strategic objectives that have been developed specifically for each SADC river basin. All CRIDF projects are selected from the SADC priority list. An MOU between CRIDF and SADC is attached at Annex **.</p> <p>CRIDF is currently involved in a number of projects in Zimbabwe. These range from optimisation of planning and management of transboundary large scale water infrastructure, design and construction of small scale infrastructure and livelihoods schemes with capacity development as a cross-cutting support. In the Limpopo Basin, CRIDF is supporting NGOs and water professionals in the holistic planning and delivery of small scale water infrastructure for improved livelihoods. Climate change risk assessments, gender and social inclusion comprise pillars of CRIDF support, while capacity development of NGOs to prepare, package and implement such projects is a focal point of CRIDF support. Support is provided to create linkages between markets and the communities for surplus produce. CRIDF's work will also facilitate the formation of a Stakeholder Advisory Committee that will bring together government and non-state actors to guide beneficiaries in the delivery process. This initiative is expected to lay foundations for the proposed GCF supported projects.</p> <p>Need para on CRIDF work in Mozambique and other SADC countries</p> <p>CRIDF's work is intended to ensure that poor people in countries of the SADC region benefit from climate-resilient water infrastructure. This will create conditions for enhanced cooperation between stakeholders in shared river basins, and strengthens the evidence base for cooperation on shared waters. Through these outputs and outcomes the CRIDF programme contributes to peaceful, climate-resilient and sustainable planning and management of shared waters in SADC, generating current and future benefits to the poor.</p> <p>CRIDF collaborates with interested partners, to support small projects to assist vulnerable communities attain food security and improved livelihoods that are, in the longer term, climate resilient. CRIDF supports actions or projects at regional, national, sub-national, or local levels that better enable communities, particularly the poor, to predict, manage, or mitigate the impacts of extreme climate events through infrastructure interventions; it is however recognised that the demand for financial resources in the Southern African region to implement these infrastructure interventions far outweighs the resources at CRIDF's disposal. Hence the need for additional funds from GCF.</p> <p>Describe financial status and how the project/programme sponsor will support the project/programme in terms of equity, management, operations, production and marketing.</p> <p>The CRIDF Project started in April 2013 and ends on 31st March 2017 although a Business Case for a second phase is currently under development by DFID. Details</p>

	<p>regarding CRIDF's Financial Status are shown below.</p> <ul style="list-style-type: none"> • Total Facility Size: Approx. US\$38m • Commitments of facility up to Dec 2015: Approx. US\$25m • Remaining funding at end of Dec 2015: Approx. US\$13m • Total planned Capex (CRIDF Funded): Approx. US\$8m
<p>B.3. Market overview</p>	<p>Describe the market for the product(s) or services including the historical data and forecasts.</p> <p>The lack of water infrastructure and environmental degradation is a huge problem for people living in southern Africa. The high dependence on rain-fed agriculture and cattle rearing means that there is a huge demand from communities living in the catchment for small scale, community managed interventions that improve water and food security and secure rural livelihoods. This is evidenced by numerous stakeholder engagements, the incidence of floods and droughts and the adverse impacts this has on food security, nutrition, property, poverty levels and the local economy.</p> <p>Provide the key competitors with market shares and customer base (if applicable).</p> <p>Four projects have already been implemented in the Save River Basin as part of the African Development bank funded SADC's Shared Water-Course Support Project (SWCSP) which supported Community Basin Mini-projects in the Buzi, Ruvuma and Save River basins. These mini-projects are small water management projects that have been identified and selected for execution, operation and maintenance by communities with support from the river basin office with the aim of improving water resource management and food security in the basins. The maximum budget for each project was capped at USD200,000 but this was sufficient to cover detailed design and construction only. Procurement and construction supervision costs were provided free by the River Basin Offices. These mini-projects provide a good foundation for learning, scaling up and coordinating IWRM&D interventions in the whole basin.</p> <p>Likewise, in the Limpopo catchment there are a number of development agencies that are active in tackling water and food security but the demand for support far outstrips the resources available. For example, FAO and the EU have mobilised USD 19 million to support 20 irrigation schemes in Southern Matabeleland and to support livestock operations in Northern Matabeleland (over 4 years 2014-18) but this is unlikely to meet demand across the Matabeleland provinces. Given the large area and population of Matabeleland and that these interventions are located in different districts, there is unlikely to be any overlap or duplication of the proposed schemes with EU/FAO project. Rather there will be opportunities for synergies, collaboration and knowledge sharing.</p> <p>In the Buzi basin, there are currently no other funding entities supporting demand led, community based IWRM&D projects.</p> <p>Provide pricing structures, price controls, subsidies available and government involvement (if any).</p> <p>N/A</p>
<p>B.4. Regulation, taxation and insurance</p>	<p>Provide details of government licenses, or permits required for implementing and operating the project/programme, the issuing authority, and the date of issue or expected date of issue.</p> <p>Some of the infrastructure interventions will require approval from the Zimbabwe National Water Authority. According to the Zimbabwe Water Act: No. 31 of 1998, none of the dams in this proposal are classified as large dams. For dams that are between 8 and 15m in crest height, with a capacity ranging from 500,000 to 1 million cubic meters, approval from ZINWA (Zimbabwe National Water Authority which is a member of the Consortium) will be required while those less than 8m, and with less than 500,000 cubic meters do not require official approval. Contractors will be required to meet the required safety regulations in Zimbabwe. The Environmental Management Agency (EMA), as the government agency responsible for ensuring that environmental requirements are met, will support and guide the Campaign in terms of the environmental regulations to be complied with. Impact Assessments will be</p>

	<p>undertaken during the design stage under the guidance of EMA, and mitigation measures will be determined.</p> <p>Describe applicable taxes and foreign exchange regulations.</p> <p>Zimbabwe currently runs on a United States dollar currency, with no national currency. Implementation contracts generally attract import duties and value added taxes. A possibility exists, however, for exemption from import duties and taxes where the projects are accorded National Status. Considering the scale of the GCF support and with support from the NDA, national status is considered a distinct possibility.</p> <p>Mozambique recently introduced exchange controls to avert a currency crisis, after running down its foreign reserves to defend its currency the metical which, up until the end of October this year, has fallen 43% against the dollar this year largely due to depressed commodity prices and rising Government debt. All foreign-exchange transactions are subject to registration, but not all require the prior authorisation of the Bank of Mozambique. Import duties and VAT will be expected to apply to imported equipment and materials.</p> <p>Provide details on insurance policies related to project/programme.</p> <p>All construction is expected to be managed through small works contracts let through a competitive and transparent procurement process. Such contractors will be required to carry construction all risk insurance cover while all professionals will be required to carry professional indemnity cover.</p>
<p>B.5. Implementation arrangements</p>	<p>Describe construction and supervision methodology with key contractual agreements. Describe operational arrangements with key contractual agreements following the completion of construction. Provide a timetable showing major scheduled achievements and completion for each of the major components of the project/programme.</p> <p>The three initial projects will feed into Regional Strategic Action Plan IV for Integrated Water Resources Management under the auspices of SADC. The implementation arrangements for each of the 3 initial projects are described below.</p> <p>1. Supporting Climate Adaptation through community based IWRM&D in the Save Basin</p> <p>ARA-Centro in Beira, Mozambique and the ZINWA Catchment Offices in Runde and Save in Mutare and Masvingo respectively will be the Executing Entities with program oversight from the Governments of Zimbabwe and Mozambique as is normal in transboundary basin projects. A Programme Management Unit will be established at the basin level which will be responsible for the management and administration of the Project, and its overall implementation. The PMU will include a qualified and experienced engineer who will be responsible for undertaking directly (or overseeing) all technical works including design and construction supervision. The day-to-day implementation of the projects in Zimbabwe will take place through the Catchment Councils and Sub-catchment councils, in the target areas, while the Basin Committees (recently formed with support from CRIDF) will perform similar functions in Mozambique.</p> <p>The proposed project has three components which will be delivered over a period of six years:</p> <ul style="list-style-type: none"> • degraded habitats rehabilitated and critical transboundary water resources protected; • small scale water resource infrastructure developed and managed to withstand climate change; and • increased capacity of stakeholders to integrate adaptation into planning for water and land resource management to support climate resilient livelihoods. <p>Detailed activities and a timetable for the completion of each of the main components are explained in more detail in the attached Concept note.</p> <p>2. Limpopo Climate Adaptation Project</p> <p>The project will be managed by the lead agency from the 'Give Dam' consortium, the Pro-Africa Development Trust which will be responsible for the management and administration of the Project, and its overall implementation on behalf of the Consortium. The day-to-day implementation of the project will be shared between</p>

	<p>three organisations which will concentrate in different parts of Matabeleland.</p> <ul style="list-style-type: none"> • ProAfrica Development Trust (Lead Agency) - working in mainly in Matabeleland South Province; • Association of Evangelicals in Africa (AEA) - working in some districts of Matabeleland North and South Provinces; • DP Foundation-working in some districts of Matabeleland North and South Provinces <p>The Project team will be responsible for the implementation of the Project on behalf of the ProAfrica Development Trust. The initial project team will be agreed with the Executing Entity, as will any changes to the team. In particular, the ProAfrica Development Trust will make available to the Project an interdisciplinary team of professionals led by a qualified and experienced engineer who will be responsible for undertaking directly (or overseeing) all technical works including design and construction supervision, on behalf of the ProAfrica Development Trust, subject to the approval of the Executing Entity. The engineer will supervise the infrastructure works on behalf of the Consortium.</p> <p>The proposed project has three components which will be delivered over a period of four years:</p> <ol style="list-style-type: none"> 1. communities mobilised, capacity developed and climate adaptation plans developed and financed; 2. increased capacity of community based institutions to better manage surface waters for small-scale irrigation, livestock watering and general water supplies in drought affected areas; and 3. climate resilient livelihoods supported and ecosystem services restored. <p>Detailed activities and a timetable for the completion of each of the main components are explained in more detail in the attached Concept note.</p> <p>3. Buzi River Basin Climate Resilience Fund</p> <p>The fund will be managed by a Fund Management Secretariat with oversight from ZINWA and ARA-Centro with technical support provided by CRIDF. The proposed project has three components which will be delivered over a period of three years:</p> <ol style="list-style-type: none"> 1. Fund management systems established and operating effectively; 2. Capacity of beneficiary groups to access and use funding effectively developed; and 3. Fund re-capitalised and community based IWRM&D projects deliver long term climate resilience. <p>Detailed activities and a timetable for the completion of each of the main components are explained in more detail in the attached Concept note.</p>
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C. Financing / Cost Information

<p>C.1. Description of financial elements of the project / programme</p>	<p>Please provide:</p> <ul style="list-style-type: none"> • a breakdown of cost estimates analysed according to major cost categories. • a financial model that includes projection covering the period from financial closing through final maturity of the proposed GCF financing with detailed assumptions and rationale; • a description of how the choice of financial instrument(s) will overcome barriers and achieve project objectives, and leverage public and/or private finance. <p>The expected cost of this six-year programme is US\$ 100,901,000. Given the highly interactive nature of the Project with numerous stakeholders, management and administration will be critical. This will be funded through a 7% management fee and will include:</p> <ul style="list-style-type: none"> • Overall Project management, implementation and delivery in terms of the agreed Implementation Plan; • Tender preparation, advertisement, adjudication and contracting for construction works; • Internal Monitoring and Evaluation of deliverables, quality assurance, timing
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and value for money;

- advocacy and information related tasks, such as arranging meetings (e.g. provincial and district level, DDRC) briefing workshops, seminars, missions etc. and making interventions and presentations;
- project-planning missions, field visits, meetings and briefing sessions;
- Public participation activities
- Financial management and bookkeeping; and
- Preliminary, interim, final narrative and financial reporting.

The GCF grant will be used to co-finance the three projects as well as to leverage additional funds from other donors to continue supporting small scale water security interventions in other parts of southern Africa in the long term.

Supporting Climate Adaptation through community based IWRM&D in the Save Basin (US\$ 64.2 million over six years)

A break down of costs for the main components is shown below.

- Degraded habitats rehabilitated and critical transboundary water resources protected (US\$ 8 million)
- Small scale water resource infrastructure developed and managed to withstand climate change (US\$ 45 million)
- Increased capacity of stakeholders to integrate adaptation into planning for water and land resource management to support climate resilient livelihoods (US\$ 7 million)
- Management and Administration at a rate of 7%. (US\$ 4.2 million)

Limpopo Climate Adaptation Project (US\$ 35,952,000 over four years)

A breakdown of costs for the main components is shown below.

- Communities mobilised, capacity developed and climate adaptation plans developed and financed (US\$ 600,000)
- Increased capacity of community based institutions to better manage surface waters for small-scale irrigation, livestock watering and general water supplies in drought affected areas (US\$ 30,000,000)
- Climate resilient livelihoods supported and ecosystem services restored (US\$ 3,000,000)
- Management and Administration at a rate of 7%. (US\$ 2,352,000)

Buzi River Basin Climate Resilience Fund (YSD 749,000 over three years)

A break down is shown below.

- Fund management systems established and operating effectively (USD 119,000)
- Initial fund capitalisation (USD 500,000)
- Capacity of beneficiary groups to access and use funding effectively developed (USD 70,000)
- Fund re-capitalised and community based IWRM&D projects deliver long term climate resilience (USD 60,000)

C.2. Project financing information	Financial Instrument	Amount	Currency	Tenor	Pricing
Total project financing (a) = (b) + (c)		<u>Options</u>		
(b) Requested GCF amount	(i) Senior Loans	-	<u>Options</u>	() years	() %
	(ii) Subordinated Loans	-	<u>Options</u>	() years	() %
	(iii) Equity	-	<u>Options</u>		() % IRR
	(iv) Guarantees	-	<u>Options</u>		
	(v) Reimbursable grants *	-	<u>Options</u>		
	(vi) Grants *				

		97,701,000			
		* Please provide detailed economic and financial justification in the case of grants.			
		Total Requested (i+ii+iii+iv+v+vi)		<u>Options</u>	
(c) Co-financing		Financial Instrument	Amount	Currency	Name of Institution
		<u>Options</u>	US\$ 3,200,000	<u>Options</u>	TBC
		<u>Options</u>	<u>Options</u>	
		<u>Options</u>	<u>Options</u>	
		<u>Options</u>		<u>Options</u>	
	Lead financing institution:				
(d) Covenants					
(e) Conditions precedent to disbursement					

D. Expected Performance against Investment Criteria

Please explain the potential of the Project/Programme to achieve the Fund's six investment criteria as listed below.

<p>D.1. Climate impact potential [Potential to achieve the GCF's objectives and results]</p>	<p>Specify the climate mitigation and/or adaptation impact. Provide specific values for the below indicators and any other relevant indicators and values, including those from the Fund's <u>Performance Measurement Frameworks</u>.</p> <ul style="list-style-type: none"> Total tonnes of CO₂ eq to be avoided or reduced per annum Expected total number of direct and indirect beneficiaries and number of beneficiaries relative to total population (e.g. total lives to be saved from disruption due to climate-related disasters) <p>As the largest impacts of climate change are likely to be on water and food resources, interventions to improve water and food security can bring about significant reduction in climate vulnerability. Global warming is changing hydrological patterns that determine the availability and quality of water causing more frequent droughts and floods. There are approximately 5.87 million people living in the Save, Limpopo and Buzi Basins (around 3.17 million in Save, 1.5 million in Limpopo and 1.2 in Buzi). The project is expected to create positive impacts on subsistence farming and pastoralist communities living in the three basins directly targeting ** households (50,000 in Limpopo, 250,000 in Save and ** in Buzi) please advise on the numbers that can be reached with the proposed schemes. Restoring ecosystem services in degraded habitats and supporting community managed, water infrastructure will enhance water security and reduce exposure to climate risk for around ** households. Building climate resilience into the design of water infrastructure based on future climate trends will also avoid the lock-in of long-lived, climate-vulnerable infrastructure.</p> <p>By investing in water infrastructure development the programme will generate a multitude of benefits including irrigation, drainage, water supply and sanitation, hydro-power generation, and flood management. These investments will reduce dependency of communities on rainfall as they enable the storage and distribution of water when and where it is needed the most. Water storage is an important means of reducing the effect of seasonal differences in water availability and protect local communities against climate and rainfall variability. Small scale irrigation schemes linkage</p>
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to water storage are expected to minimise the impacts of dry spells and have a significant impact on yields and rural livelihoods (maize yields are expected to increase by at least three-fold with small scale irrigation). Together with livestock watering schemes, irrigation can increase adaptive capacity, increasing and diversifying food intake building resilience and enabling year round cropping to meet household food security needs as well as generating a surplus that can be sold.

Rehabilitating degraded habitats will restore ecosystem services and underpin the recovery of rural livelihoods. Riparian restoration in particular, will increase vegetative ground cover with grasses, shrubs and trees which will enhance organic matter, increase water retention, and reduce runoff. This will stabilise river banks and prevent erosion and siltation of rivers and reduce the risk of downstream flooding. It will also provide habitat and wildlife corridors, and help to maintain the health of aquatic organisms to support riparian and agricultural livelihoods and improve food security for around ** people. Stemming deforestation with support for the uptake of fuel efficient stoves and interventions to improve the efficiency of charcoal production combined with replanting schemes and improved silviculture will create a sustainable supply of timber and fuel-wood. Investing in sustainable forest management and agro-forestry interventions, along with other measures to protect critical watersheds in the basin, will restore forest ecosystem services, increase forest productivity and reduce erosion, improving soil stability and fertility leading to increased agricultural productivity and reduced siltation of rivers and other water bodies. This will also result in increased resilience to extreme weather events such as flooding and the effects of variable rainfall on crop production.

Developing water resources and rehabilitating degraded habitats will provide the foundation for climate resilient livelihoods. The proposed interventions will improve soil fertility, pasture quality and enhance agricultural production. Adopting climate resilient farming and pastoral practices is expected to have a positive impact on household food security and incomes. The programme will support improved soil and water management practices including conservation agriculture, agroforestry and integrated farming systems to reduce vulnerability to climate change, reduce the risk of crop failure and raise household incomes. For example, rotation systems using leguminous crops (e.g. rotating maize with drought-resistant indigenous crops) and fallow periods and inter-cropping can be highly beneficial in terms of pest and disease management and nutrient management (reducing inorganic fertiliser requirements). These approaches also provide a year-round income from different crops maturing at different times and yield increases from growing a diverse range of crops utilising different parts of the agro- ecosystem (and nutrient recycling). Conservation agriculture has been applied in this area before and has been shown to increase yields of sorghum, millet and maize, from an average of about 0.2 metric tonnes to between 3 and 4 metric tonnes per hectare⁷. Agro-forestry (to maintain soil cover and improve water retention by integrating tree species with agriculture), small wood lots and integrated livestock management systems are also options that can improve soil structure and fertility and maximise the use of resources by combining crops (food and fodder) with livestock. Crop residues will also be used as mulch to trap moisture in the soil, control weeds, and maintain cooler soil temperatures.

Agriculture uses a significant amount of water (e.g. 81% of Zimbabwe's water is used for agriculture) for irrigation, fish farming and livestock watering so interventions to improve the efficiency of water use in agriculture are expected to impact significantly on water supply. The proposed approaches emphasise moisture management, minimal soil disturbance (reduced tillage), perennial soil cover and crop rotations along with optimisation of inputs and erosion control measures. This protects the soil from direct rainfall impact, improves water retention, replenishes organic matter, improves crop yields and reduces the risk of crop failure. Adoption of crop varieties and forages with increased resistance to heat stress, shock and drought will minimise climate change effects while conservation agriculture will improve soil and moisture management. Moreover, as crop and livestock production increases, opportunities for alternative livelihoods increase including small scale processing of livestock products such as cheese and other milk products.

Developing rural economies and driving down poverty in the targeted river basins will require that support for water development and climate resilient production systems is delivered in tandem with market development initiatives. Support to

⁷ Danbane Trust and Zimbabwe Project Trust <http://www.asfg.org.uk/success-stories/conservation-agriculture-in-zimbabwe>

	<p>improve resource management and agricultural production alone will not be sufficient to provide livelihood security for vulnerable communities. Farmers and pastoralists need better access to functioning markets and support services such as credit and other financial services, extension services etc. in order to increase household incomes and escape poverty. The programme will support the analysis of existing market failures and develop measures to improve the way market systems function for poor people living in the basin. By incorporating market development initiatives that increase the inclusiveness and efficiency of markets for vulnerable households, the project will improve their performance in rural markets, raising income levels across the target areas. In this way, improved water security and increased production from agriculture can be translated into reduced levels of poverty and vulnerability among target households.</p> <p>Strengthening community institutions such as catchment councils and building awareness of climate threats will promote climate-responsive planning and development. This will reduce household vulnerability levels to prevailing climate threats in the catchments and develop the necessary skills needed to adapt to future climate change as well as ultimately reduce the need for external support. Building awareness of climate threats and risk-reduction processes in conjunction with support for analysis and surveys will increase the uptake and use of improved practices by policy makers and other key decision makers.</p> <p>Supporting community driven projects has been shown to enhance cooperation between upstream and downstream communities and will reduce the potential for conflicts over natural resources. Involving stakeholders in the process of identifying and prioritising initial project ideas as well as implementation will have a positive impact in terms of cementing cohesion between up-stream and down-stream communities. Reduced soil erosion and siltation, equitable allocation and access to resources improves upstream – downstream cooperation nationally and internationally.</p>
<p>D.2. Paradigm shift potential [Potential to catalyze impact beyond a one-off project or programme investment]</p>	<p>Provide the estimates and details of the below and specify other relevant factors.</p> <ul style="list-style-type: none"> • Potential for scaling-up and replication (e.g. multiples of initial impact size) • Potential for knowledge and learning • Contribution to the creation of an enabling environment • Contribution to the regulatory framework and policies <p>The inclusion of multiple dams and ancillary schemes within the programme means that a coordinated approach can be used to manage floods. The low storage ratios due to low water development in Zimbabwe, Mozambique and other Southern African countries means that dams cannot be used to store major flood waters. Most dams in the region have been designed for other purposes than flood management, mainly to produce hydropower. Most dams are also operated in a stand-alone mode, with narrow objectives, within the framework of a single hydrological year⁸. The dams developed under this project will be such that the cumulative storage would play an important role in flood management.</p> <p>The potential for scaling up and replication is considered high both within the basin, regionally and beyond. This is due to the large number poor rural communities living in other river basins that are affected by droughts and other climate related threats. The initial focus is the three river basins in Zimbabwe and Mozambique but there is scope to replicate this initiative in other areas of the basin and in other river basins across the SADC region. Resources will be allocated to facilitating high levels of secondary uptake in other areas of the basin through cross visits, policy briefs, presentations and meetings using a variety of web based and other communication tools. For example, in the Limpopo project, resources will be allocated to building the capacity of the “Give a dam” consortium to secure support from other financing sources during the project and fund raising targets will be included in the log-frame to ensure the long term viability of the consortium. Moreover, a number of donors have already expressed an interest in supporting the Buzi Fund including Sida and the World Bank. Resources will be allocated to securing this support during the project and fund raising targets will be included in the log-frame to ensure the long term viability and sustainability of the fund.</p>

⁸ SADC (2011). Climate change adaptation in SADC: a Strategy for the Water Sector

	<p>There is strong potential for knowledge and learning both horizontally between communities and vertically between catchment councils and policy makers. Effective mechanisms will be developed to share effective technologies, practices and approaches beyond the beneficiary communities to increase uptake and to mobilise external actors into developing an enabling policy environment. These will include farmer-to-farmer video documentaries, community meetings as well as responsive surveys and analysis and briefing notes for policy makers to enhance knowledge and understanding and promote dialogue.</p> <p>The programme will identify best practice in the development of small-scale infrastructure and climate resilient livelihoods of rural communities in Southern Africa. The programme will generate a greater understanding of how to develop sustainable small-scale rural infrastructure for livelihood support, both within the Save basin as well as within other SADC transboundary basins. Case studies and assessments will be carried out and communicated to promote replication and scale up.</p> <p>Each project will emphasise developing communities' knowhow and skills to make informed choices for adaptation to climate variability and climate change. Field workers and local researchers will act as mentors building farmers' capacities to make informed choices on habitat protection, water management, as well as decision making around agricultural and livestock production systems. Field workers will emphasise flexibility in decision-making on the selection of approaches and practices by farmers. It will also build the capacity of beneficiaries to better understand the agro-ecosystem and try new innovative approaches hence enhancing their adaptation capacity. The use of field trials to identify climate resilient grazing, cropping and improved farming strategies will promote better understanding of the approaches that work under local conditions. Cross visits of beneficiaries to various field trials will aid in the dissemination and uptake of improved varieties and farming practices.</p>
<p>D.3. Sustainable development potential <i>[Potential to provide wider development co-benefits]</i></p>	<p>Provide the estimates of economic, social and environmental co-benefits. The expected benefits are listed below.</p> <p>Economic co-benefits</p> <ul style="list-style-type: none"> • Improved water supply and increased access to reliable water for household use and irrigation leading to increased agricultural and livestock productivity and diversification from an improved stock of water infrastructure • Improved assets at the household and community level • Improved income generation (as excess produce can be sold) and food security from established irrigation schemes • Increased agri-business opportunities with potential for value addition thus boosting local economies • More efficient use of water in agriculture, leading to increased productivity and household incomes • Investment in water resources management and development will catalyse local economic development and increased employment opportunities (as the beneficiary farmers hire additional labour during peak season), especially for the youth. <p>Social co-benefits</p> <ul style="list-style-type: none"> • Increased productive and adaptive capacity of individuals, households and communities due to increased access to water supply. • Reduced impact of climate-related shocks on food security of target households • Increased water, food and energy security from increased water and wood availability, substantially increasing yields and resilience to the impacts of climate change in the region • Strengthened and climate resilient livelihoods from increased access to water • Decreased drought vulnerability and strengthened adaptation to climate change • Improved dietary diversity of community members • Generally improved and sustainable diverse local economic livelihoods options. • People living with HIV and AIDS and other chronic diseases will be able to better manage their condition and will have access to water and to a more diverse diet. • Increased self-determination and sense of community ownership and control of initiatives through capacity development • Improved nutrition as the diversity of crops, livestock and fish also means access to larger variety of foodstuffs

	<ul style="list-style-type: none"> • Increased sustainable livelihood opportunities resulting from enhanced yields (e.g. value addition such as canning of produce or selling mealie-meal instead of maize, etc) leading to increased incomes as well as improved health and education. • Reduced potential for community conflicts • Increased capacity of communities to effectively manage water and other natural resources • Improved planning and risk management in agriculture <p>Environmental benefits</p> <ul style="list-style-type: none"> • Ecosystems services restored and environmental degradation reversed. • Reduced erosion and improved soil quality, water retention capacity and increased agricultural productivity from adoption of improved land-use practices and restoration activities • Reduced deforestation with increased forest and agro-forestry cover along with increased productivity and diversity of forest products • Decreased environmental degradation • Improved biodiversity and preservation of ecosystem services in critical watersheds <p>Gender-sensitive development impact</p> <ul style="list-style-type: none"> • Reduced time spent fetching water for women and children increasing time for school and economically productive activities • Increased water, food and energy security for women headed households leading to improved nutrition, health and well being as well as creating more time for economically productive activities • Reduced migration of men (due to increased livelihood opportunities locally) leads to reduced vulnerability levels for women • Reduced risk to women and children from disasters • Gender sensitive indicators will ensure effective targeting of women and equitable participation of women in project interventions • Strengthened, climate resilient livelihoods for women • Improved water access and local livelihood support will reduce disruption of school attendance
<p>D.4. Needs of recipient [Vulnerability to climate change and financing needs of the recipients]</p>	<p>Describe the scale and intensity of vulnerability of the country and beneficiary groups and elaborate how the project/programme addresses the issues. Examples of the issues include the following: 1) Level of exposure to climate risks for beneficiary country and groups; 2) Does the country have a fiscal or balance of payment gap that prevents from addressing the needs; 3) Does the local capital market lack depth or history; 4) Needs for strengthening institutions and implementation capacity.</p> <p>Both Mozambique and Zimbabwe have high levels of poverty and low adaptive capacities. Zimbabwe is a land-locked, semi-arid country which has experienced political and economic crisis over the past decade. It is one of the only countries in the world whose Human Development Index (HDI) is lower today (ranked 156 out of 187 countries in 2014) than it was in 1970 with 12% of the population living in severe poverty. Mozambique is one of the poorest countries in the world, in 2014, it was ranked 178 (out of 187) on the HDI with 59.6% of the population living below the poverty line (US\$1.25 PPP), 44.1% living in severe poverty and an average life expectancy of 59.9 (UNDP HDI data 2014). The country was ravaged by a 16-year civil war that ended in 1992 and it has one of the lowest levels of water consumption in the world. Both countries lack the resources and capacity to deliver the necessary support to enable farmers and pastoralists to adapt. The economic downturn in Zimbabwe during the last decade adversely impacted on advances in water management and dampened the momentum that had been generated during the previous decade. This has led to low investments in water resources development and management, coupled with general neglect of existing infrastructure. Supporting improved water resource management in Zimbabwe and Mozambique is crucial not only because of the high number of people involved in agriculture and agriculture's contribution to economic growth (15% of GDP) but also because Zimbabwe (and increasingly Mozambique) rely on hydropower (59% of Zimbabwe's energy supply derives from hydropower). Financial constraints therefore constitute one of the greatest barriers to adaptation.</p> <p>Climate data show that Zimbabwe and Mozambique are already beginning to experience the effects of climate change. Rising temperatures (maximum temperatures have risen by 2°C over the last century) and rainfall variability have caused recurrent droughts and extreme flood events with significant impacts on the national economies and the livelihoods of the poor due to a high dependence on rain-fed agriculture. In Mozambique, the mean temperature is expected increase by 1.8 - 3.1°C with precipitation</p>

expected to decrease by 2-11% and solar radiation to increase by 2-3% by 2075 (National Communication to UNFCCC, 2003). Households are also vulnerable to extreme events with flooding cases reported almost on an annual basis particularly in the lower lying areas of Mozambique. After such floods, high temperatures and evaporation rates contribute to crop failure due to water stress. In Zimbabwe, annual rainfall levels (based on the 1961–90 average) are projected to decline between 5–20% by 2080 in all of the Zimbabwe's major river basins. the GDP of Zimbabwe dropped by 3 percent and 8 percent after the 1983 and 1992 droughts, respectively. The rainy season normally begins in mid-October and ends in early May but recent trends are towards the rains starting as late as early December and ending as late as June. These conditions, combined with warming trends, pose a major threat to the economy, due to already declining agricultural outputs, high climate variability (both spatially and temporally) and climate sensitive resources (62% of the population are farmers). The increased incidence of drought is expected to cause a sharp decline in crop and livestock productivity (with the Net Primary Productivity of rangelands projected to decrease from the current average maximum of over 8 tonnes per hectare per year to just over 5 tonnes per hectare per year by 2080⁹), changes in wildlife ranges, an increase in wildfire incidents and the possible expansion of malaria zones. Southern Zimbabwe is predicted to become less suitable for the production of important food crops including maize and sorghum with the exception of possibly pearl millet, cassava, and drought tolerant legumes.

Zimbabwe is particularly vulnerable to climate change due to its high dependence on surface waters for water supply and the limited institutional capacity to respond to the emerging threat. Zimbabwe relies on surface water from dams and rivers for 90% of its supply (most of which is used for agriculture). Despite having 20 million megalitres of total annual renewable available freshwater, Zimbabwe only utilises 22% of its runoff due to a lack of funding, expertise and technology¹⁰ (in most industrialised countries, this number ranges between 70 and 90%¹¹). Evaporation is predicted to increase by between 4-25% in the river basins and runoff is also projected to decline by up to 40%. This water stress will adversely impact agricultural and livestock yields from rangelands as well as public health, forestry and biodiversity, human settlements and tourism. Measures to increase water storage and distribution are therefore critical in adapting to climate change. The development of multipurpose dams that can balance flood flows and cater for growing water demands is needed as well as to mitigate against drought.

Farming communities and pastoralists are highly vulnerable to drought due to a lack of irrigation and pervasive poverty. Many water sources, such as rivers and lakes, are no longer perennial and dry up in winter because of the low rainfall during this period. Livestock production is in a state of decline due to persistent drought with cattle herding, an important livelihood in the region, particularly affected due to a shortage of pastures and fodder. Extensive deforestation has also contributed to soil erosion and siltation of waterways. The situation is compounded by the high prevalence of HIV/AIDS and its associated impacts on water requirements and capacity.

Because communities lack resources to invest in water storage and abstraction facilities, their crops and livestock are vulnerable during dry spells and droughts. Water infrastructure is inadequate to meet the growing demands for development and services, rapid urbanisation, climate variability and change. Farming communities and pastoralists living in the Save Basin are particularly vulnerable to drought due to a lack of irrigation and pervasive poverty. Most water sources, such as rivers and lakes, are no longer perennial and dry up in winter because of the low rainfall during this period. Livestock production is in a state of decline due to persistent drought with cattle herding, an important livelihood in the region, particularly affected due to a shortage of pastures and fodder. Extensive deforestation has also contributed to soil erosion and siltation of waterways.

Maize is one of the main staples grown in the drier areas and is highly sensitive to climate change. Current yields of maize are well below 1 t/ha which is below the level needed to attain food security and Zimbabwe now relies on maize imports to supplement its own production. Climate impacts have been exacerbated by an increasing trend towards maize growing on communal lands since the 1980's (81% of Zimbabwe's farmers are communal) making communal farmers much more vulnerable to climate change and

⁹ Zimbabwe's Second National Communication to UNFCCC (2013)

¹⁰ Zimbabwe National Climate Change Response Strategy Draft 2013

¹¹ Source: CGIAR 2011

	<p>food insecurity than commercial farmers who tend to grow more cotton and sorghum which are more climate resilient. Even diversified livelihood systems with a livestock component are expected to become more vulnerable due to climatic variability in semi-arid areas which poses major threats to natural processes that sustain fodder production for livestock and moisture for rain-fed crop production. If no adaptation measures are taken, yields from rain-fed agriculture in Zimbabwe are expected to decrease by up to 50% by 2020.</p> <p>Vulnerability to periodic floods and famines in the three river basins is exacerbated by low institutional capacity of local water resources management Institutions, catchment management councils. There have been frequent droughts in the past decade which have caused food shortages and heavy economic losses to the population, with the most affected being the rural poor. Chronic vulnerability is also common as it relates to food insecurity, water pollution (agro-chemicals and mining) as well as water and sanitation-related diseases. GCF support for the establishment and strengthening of stakeholder structures within the shared basins will contribute significantly to enhancing confidence and mutual trust as well as addressing upstream downstream issues in the utilisation and management of the shared water resources. Capacity support for communities and catchment management councils will strengthen the institutional capacity of communities and local agencies.</p>
<p>D.5. Country ownership [Beneficiary country ownership of project or programme and capacity to implement the proposed activities]</p>	<p>Provide details of the below and specify other relevant factors. Coherence and alignment with the country's national climate strategy and priorities in mitigation or adaptation. Brief description of executing entities (e.g. local developers, partners and service providers) along with the roles they will play. Stakeholder engagement process and feedback received from civil society organizations and other relevant stakeholders</p> <p>The proposed interventions align well with national climate adaptation priorities in Zimbabwe. Zimbabwe signed and ratified the UNFCCC in 1992 and has since submitted two national communications, in 1998 and 2013. Zimbabwe's most recent National Communication in 2013 identifies adaptation in the agriculture sector as a key priority with improving water availability and irrigation systems, improved land management and integrated crop production identified as appropriate adaptation strategies. The Communication also calls for the adoption of new agricultural management strategies that include the use of short season varieties especially for maize, moisture management, the use of drought resistant small grains and the adoption of cash crops such as cotton which is deep rooted and can draw water from deeper soil layers. Water resource development and management and climate smart agriculture are two key priorities in Zimbabwe's National Climate Change Response Strategy (NCCRS, 2014). In its NAPA, Mozambique has prioritised improving the level of control and evaluation capacity of river water flows in order to reduce the impacts of droughts and floods within its hydrological basins along with reforestation and conservation agriculture to sustain agricultural livelihoods. The proposed interventions also align with a number of objectives in the SADC climate change adaptation strategy for the water sector including:</p> <ul style="list-style-type: none"> • improving food security through the development of efficient and resilient irrigation and drainage systems; • increasing water storage relying both on natural and constructed systems; • informing, consulting and involving all relevant stakeholders concerned with climate change; • developing the local knowledge and the technology necessary to adapt to climate change in the water sector; • making climate science accessible to the average citizen to improve people's understanding of the problem and their receptiveness to changes; and • incorporating uncertainty about <i>the future climate into planning and decision making.</i> <p>Programme objectives are also in line with national policies and strategies in Zimbabwe and Mozambique. These include Zim Asset¹², the Medium Term Plan (2011-2015 which recognises that climate change poses a significant challenge to social and economic development), the Agricultural Investment Plan (ZAIP 2012-2016) and the Water Act (1998) which provides for the equitable distribution and stakeholder involvement in water management. Zimbabwe and Mozambique are also signatories to</p>

¹² Zimbabwe Agenda for Sustainable Socio-Economic Transformation (Zim Asset) "Towards an Empowered Society and a Growing Economy" OCTOBER 2013- DECEMBER 2018

	<p>the Shared Water Course Systems Protocol, which provides the basis for the management of international rivers in SADC. The programme will be co-financed by DFID’s CRIDF small-scale infrastructure programme in Southern Africa.</p> <p>The proposal is strongly supported by the governments of Zimbabwe and Mozambique as well as other stakeholders. In addition to the target beneficiaries, the CRIDF design team have consulted with a range of stakeholders who actively support this proposal (see Section G). Going forward, the proposal design will ensure that adaptation interventions are gender equitable by incorporating a gender analysis into the design phase. The M&E system will also include gender disaggregated indicators and indicators that are gender sensitive such as trends in the time women spend on household roles and the time missed school days by girls (which are associated with climate impacts). A specific mechanism will also be developed to ensure the future engagement of key stakeholders in accordance with the Fund’s environmental and social safeguards (ESS) and stakeholder consultation guidelines. The proposal places decision-making responsibility firmly with in-country institutions. The proposal has been endorsed with a no objection letter from the NDA’s in accordance with the Fund’s no-objection procedure (need to secure this before submission).</p> <p>Ownership at the community level will also be achieved by building on on-going local initiatives and facilitating a stakeholder managed selection of community beneficiaries (i.e. self-selection). A participatory approach will be crucial to building ownership at the local level and ensuring that adaptation responses are acceptable in the local context. This will increase transparency, participation and inclusion of vulnerable households in target interventions. This is in line with district level development planning in Zimbabwe which follows a bottom up approach with WARDe identifying their own development priorities for consideration by the local authority - Rural District Councils (RDCs). Community committees will be supported to prepare work schedules for their own contribution and to set time allocations for each Activity. During programme implementation, coordination with local community structures will be continuous to ensure their full engagement and to ensure that communities maintain overall control and ownership of the process . CRIDF has already conducted an in-depth assessment with key stakeholders and has created a preliminarily list of target sites in all basins. In order to enhance the sustainability of community assets, training will be provided to the communities to ensure that they are aware of factors such as the impact of catchment degradation on sedimentation and the consequent loss of storage capacity of their dams. Training will also address such factors as the maintenance of earth embankments, spill ways, etc.</p> <p>CRIDF has a strong track record of supporting water resource management in the SADC region and is a credible champion for this programme. CRIDF has considerable knowledge and experience of supporting IWRM&D projects and an extensive network of local partners in the region. The executing entity has a strong capacity to deliver the programme will provide technical assistance to develop capacity of local partners. Preliminary discussions with key stakeholders in the target areas and the initial scoping studies identified the need to develop water resources for productive uses as well as environmental protection. In particular, there is an urgent need for the development of irrigated agriculture to provide resilience to climate change.</p>
<p>D.6. Effectiveness and efficiency[Economic and financial soundness and effectiveness of the proposed activities]</p>	<p>Provide details of the below and specify other relevant factors (i.e. debt service coverage ratio), if available. Estimated cost per t CO2 eq (total investment cost/expected lifetime emission reductions). Co-financing ratio (total amount of the Fund’s investment as percentage of project). Economic and financial rate of return with and without the Fund’s support.</p> <p>Supporting local initiatives is the best way to strengthen community participation in climate adaptation initiatives. For example, much of the day-to-day responsibilities for – and various effects of – integrated water resource management and development (IWRM&D) occur at local catchment and community levels. This is particularly evident when considering such threats to the basin’s water resources posed by environmentally damaging land use practices that lead to erosion and siltation of water bodies. To effectively engage communities in IWRM&D, small-scale investments are needed to link local communities more closely to IWRM processes and provide practical experience and lessons in IWRM. Deepening the participation of local people in IWRM processes will</p>

enhance climate resilience, contribute to poverty reduction, and improve health especially in relation to HIV and AIDS (currently 1.2 million people live with HIV¹³).

Value for money will be ensured by effective procurement of contractors to deliver programme outcomes. Construction and/or repair of the schemes will be undertaken by properly procured and competent contractors who will be responsible for the provision and maintenance of all necessary construction plant in order to meet the design specifications. Construction costs, as itemised in the Bill of quantities and as required in the contract documentation, will include for all Activities, works and materials required to complete construction. Construction will be supervised by a qualified engineer appointed by ZINWA and ARA-Centro with the approval of CRIDF. The contractor will be responsible for health and safety on site as required by regulation and will work in close collaboration with the representatives of the community, in particular with regards to those aspects of the work which will be undertaken by community labour. The main components of the proposed project are shown below with timings for each.

Supporting community based water management schemes is cost effective as they tend to be rooted in community needs and often the community takes responsibility for the long term operation of these schemes. These schemes and support for climate resilient livelihoods are expected to deliver concrete benefits to vulnerable households within a relatively short timescale. The timely delivery of positive outcomes will help to build awareness of adaptation processes and encourage climate resilient practices in the long term reducing the need for costly emergency food aid interventions.

Promotion of good water resource management practices will deliver improved efficiencies in the way water and natural resources are managed. Measures to conserve and store water more efficiently and conservation agriculture will be promoted to improve water, food and energy security. Moreover, good levels of secondary uptake of good practices by communities neighbouring the target areas are expected as demonstrated by past experience with similar interventions in the coping with drought project and in the Pungwe Basin in Zimbabwe. The adoption of improved agricultural, pastoral and water management practices is expected to result in reduced levels of erosion, higher agricultural yields and river bank stabilisation.

The proposed programme is likely to attract additional funding hence increasing the impact of GCF's investment. CRIDF has investigated and assessed the level of interest from development partners who have an interest in the region to contribute to the programme and the strong interest from a number of them demonstrates the potential for leveraging additional finance into the programme. Moreover, once economic development takes place in the target area, more innovative financing mechanisms become possible, based on the ability to pay of future economic users.

E. Brief Rationale for GCF Involvement and Exit Strategy

Please specify why the GCF contribution is critical for the project/programme.

A GCF contribution is critical for this programme due to the urgent need for support and because the continuing risk of flooding of downstream areas and food insecurity, increasing poverty, is real and growing each year as temperatures rise and rainfall becomes more erratic. Failing to act now only increases the vulnerability of communities living in the basins to droughts. The programme will produce very tangible assets for local rural communities in the three river basins. These assets –small scale water storage facilities and related irrigation, livestock watering and community water sources – will improve food and water security leading to more climate resilient livelihoods with reduced vulnerability to climate variability and change. Moreover, capacity support for catchment councils along with market development interventions will provide local communities with effective structures to support community driven adaptation initiatives around water and agriculture which will avert food shortages, protect ecosystem services and secure livelihoods in the long term.

The programme meets all the investment criteria and there is a strong case for urgent action.

Mozambique and Zimbabwe are among the poorest most climate vulnerable countries in the world due to the aridness, low adaptive capacities and weak institutions to deal with climate change impacts. Community

¹³ Zimbabwe National Climate Change Response Strategy Draft 2013

based interventions have been shown to generate positive outcomes for target beneficiaries in earlier similar interventions. GCF funding will help to scale up and replicate these approaches in other drought prone areas. Financial assistance from GCF can also play a critical role in catalysing further infrastructure development and improved water governance in Zimbabwe and Mozambique.

GCF intervention at this stage has added advantages in that there is room to cooperate with other funding partners to optimise outputs while learning from experiences of the past where similar efforts have been pursued. Other donors have indicated a willingness to co-finance (check??) which means that GCF support will leverage additional funds for building climate resilience in the Save River basin. For example, DFID are currently preparing the business case for a 2nd scaled up phase of CRIDF which would potentially provide additional resources and management support to the programme, as well as dedicated expertise in helping to raise additional funds (including private sector grants) so that the project can be scaled up (most obviously in constructing more of the Dams in the Limpopo database mentioned above, as well as spreading to other locations and countries. A detailed feasibility study will be undertaken during proposal development.

Please explain how the project/programme sustainability will be ensured in the long run, after the project/programme is implemented with support from the GCF and other sources.

A major strength of the proposed interventions is that they are expected to be community driven and owned. This builds in sustainability and social development to the management of water and other natural resources. The programme has the potential to be co-financed and has a high potential for scale up and replication. A clear exit strategy will be developed during the design phase based on securing funds from other donors. This will ensure the long-term sustainability of programme interventions.

F. Risk Analysis

Please describe the financial and operational risks and discuss mitigating measures.

The main financial risk is the failure to disburse funds on time as this will create delays in implementation and prolong vulnerabilities to climate impacts which are already pronounced. Close collaboration will be maintained between the Executing Entity and GCF on the one hand and with communities on the other. Project management systems will be simple and streamlined to avoid unnecessary bureaucracy. Further financial risk could arise from the mismanagement of funds. The programme's financial management system and the project selection process will be designed to maximise transparency and accountability and financial management competencies will be built into the programme management team either through recruitment or capacity development. An external audit will also be carried out each year.

Operationally, the main risk arises from procuring poor contractors to carry out the construction works. This would result in defects in the construction process and low operational efficiencies. Capacity support will therefore be provided to prepare Project technical staff to supervise construction and community labour works under the direction of the Project Engineers. This will ensure quality control and will extend the capacity of the implementation team in the construction phase given the large distances between sites. The capacity building will cover all relevant aspects of dam rehabilitation, ancillary works and catchment conservation.

An additional risk arises from inadequate management of the projects. This could result in deficiencies in targeting of proposed interventions, poorly delivered livelihood interventions, delayed implementation and inadequate monitoring and evaluation. This will be mitigated through the recruitment of a competent and experienced team leaders and management teams to provide technical oversight and assistance along with technical backstopping from call down consultants. Political economy issues could also derail the projects. The programme will build-in transparent, fair and equitable management structures to dilute political interference by politicians that could result in favouritism thereby depriving the real needy.

Please briefly specify the substantial environmental and social risks that the project/programme may face and the proposed risk mitigating measures.

Inevitably the infrastructure interventions carry some risk of social and environmental impacts. However, this programme has strong potential for positive environmental impacts through the reversal of land degradation and the subsequent restoration of ecosystem services. Moreover, all the target areas are heavily disturbed communal lands, with no clearance of virgin land expected and the irrigation schemes will be located in fields which are currently being utilised for frequently failing rain-fed agriculture. So far no detailed environmental impact assessments have been undertaken for the identified projects but these would be included under full proposal development to identify potential issues and suitable mitigation activities – this will form part of the design report. The report will highlight areas of intervention within the catchment area. Environmental Management Agency (EMA) will then be tasked to assist the communities in rehabilitating or improving the affected areas including the digging of contour ridges in the communal dry

land fields within the catchment areas. Social impacts will be assessed and if necessary discussed with the RDCs to ensure compliance with local health requirements. These are likely to relate primarily to public health as there is a possibility of an increase in cases of Malaria due to the dams, the infection of those who enter to stored water bodies with schistosomiasis and illnesses caused by the ingestion of untreated surface waters of poor quality. The Rural District Councils are responsible for public health at community level. The training elements of each project will include training and awareness creation related to these risks in close collaboration with the Rural District Councils.

Failure to integrate climate change concerns in the design of infrastructure schemes will increase water wastage and deplete water resources in the long term. Each project will ensure that potential changes in water availability due to climate change are taken into account during the design of dams and water use schemes. Moreover, water infrastructure will be designed to be sufficiently resilient towards potential impacts from climate change, such as soil erosion caused by floods or excessive rainfall. The programme will also take into account the possibility that demand for water may change as a result of climate change. Dams will be designed to balance the interests of environmental flows, flood reduction, agriculture and hydropower generation.

From an environmental standpoint, a potential risk is that the agricultural practices promoted are not sustainable in the context of climate change. The programme will manage this risk with thorough research and analysis, wide consultation and field trials to test approaches to ensure that cropping and livestock strategies being promoted by the programme are appropriate in the context of future climate projections for the target area. The projects will also build capacity of stakeholders to access and use weather and climate information for agricultural planning and risk management. Moreover, the programme will promote and support diversification to off-farm livelihoods strategies that may be less sensitive to climate hazards.

The programme is aimed at protecting and developing in a sustainable manner the water resources of the three river basins, taking into account the needs of multiple stakeholders. The programme will give special consideration to addressing riparian degradation, deforestation and poor land use in catchments areas which alter runoff patterns, inhibit natural recharge of groundwater, and increase risk of flooding. It will also support interventions that reduce siltation of aquatic ecosystems and support water storage schemes. Sustainable utilisation of the shared water resources will be achieved in a sustainable manner to ensure the protection of natural resources. The community based approach will enhance knowledge of water resource management at community level; improve farming practices; reduce erosion; reduce water pollution and improve water supply and sanitation. Environmental risks are considered to be low but will be thoroughly assessed in an EIA during project design.

A severe drought during implementation could divert attention and resources into disaster response. This would reduce the level of commitment of key stakeholders to interventions that bring long term adaptation benefits. Each project will emphasise community ownership to ensure interventions are based on needs prioritised by the communities. A flexible, adaptive and responsive approach will be adopted during implementation to enable timings to be adjusted as necessary.

Elite capture and corruption could derail the projects. The programme will ensure that benefits are targeted at vulnerable groups by undertaking participatory vulnerability assessment in designing adaptation strategies with communities. Strong safeguards will be put in place to prevent corrupt practices and elite capture.

Limited access to land and natural resources, lack of credit and input in decision making, limited access to information and new ideas, and under-valuation of women's opinions constrains the ability of women to participate in and benefit from the programme. Gender sensitive indicators will be built into the design to ensure effective targeting of vulnerable women. The programme design will include a gender analysis and careful design of interventions to ensure equitable distribution of project benefits.

Competition for scarce resources could increase and lead to violent conflict. The programme is intended to strengthen the natural resource base and enhance water and land resources. In the short term however, it is possible that droughts and floods will deplete resources and lead to conflict. The programme design will therefore, include measures to mitigate this.

Community interest and engagement may decline if target interventions do not generate immediate benefits. Stakeholder analysis to date has demonstrated that water security is a top concern among communities living in the target area. Designing interventions around community needs with close involvement of communities themselves will reduce the potential for reduced engagement and ownership at the community level.

Please specify the plan for multi-stakeholder engagement, and what has been done so far in this regard.

During the initial scoping study numerous stakeholders were consulted including the Provincial and Local Government Authorities, the provincial offices of Central Government departments, a number of NGOs and civil society groups and communities. More recently there has been further consultation with the NDA in Zimbabwe. An engagement strategy will be developed during the programme design to maximise stakeholder involvement during all stages of the programme cycle.

Key-stakeholders in the proposed Programme include:

- Stakeholder Advisory Councils
- JWC (Member States - Mozambique and Zimbabwe)
- District Authorities
- Funding partners: DFID / SDC
- Catchment Councils and ARA Centro
- ZINWA Data and Research Unit and ARA Centro and Met Offices in Mozambique and Zimbabwe
- Catchment Management Councils
- Sub-catchment Councils in Zimbabwe
- Zimbabwe and Mozambique National Authority
- Zimbabwe National Water Authority (ZINWA)
- Environmental Management Agency (EMA)
- Environmental Council of Zimbabwe
- Department of Mechanisation in the Ministry of Agriculture
- Department of Irrigation in the Ministry of Agriculture
- Agritex (extension services)
- Agricultural Research, and Livestock Production
- Rural District Councils
- Provincial Administrators
- District Administrators
- Chiefs / Local Traditional Leaders
- NGOs active in the area
- Communal farmers
- Village community
- Ministry of Environment, Water and Climate Provincial Officers
- Faith based Organisations. District Development Fund (DDF)
- Development partners

H. Status of Project/Programme

1) A pre-feasibility study is expected to be completed at this stage. Please provide the report in section J.

An initial baseline scoping study of degraded areas was undertaken in the Save basin in Sept. 2014 (attached at Annex **) on behalf of CRIDF. A pre-feasibility assessment of each scheme, leading to full feasibility studies of selected projects will be undertaken during project design.

For the Limpopo project, two Assessment Missions were undertaken in 2012-13 (attached at Annex **) on behalf of CRIDF to begin to prepare a Project to support a second "Give a Dam" Campaign in Matabeleland. The Project has been through the first and most of the second CRIDF Screening processes.

For the Buzi Fund, CRIDF prepared an initial assessment (attached at Annex **) confirming the relevance, viability and potential the establishment such a fund would have in improving the livelihoods of vulnerable communities in the Buzi Basin.

2) Please indicate whether a feasibility study and/or environmental and social impact assessment has been conducted for the proposed project/programme: Yes No

(If 'Yes', please provide them in section J.)

A detailed feasibility study will be undertaken during detailed proposal development to learn from previous experience, conduct further stakeholder consultations. An environmental and social impact assessment will also be carried during the detailed project design.

3) Will the proposed project/programme be developed as an extension of a previous project (e.g. subsequent phase), or based on a previous project/programme (e.g. scale up or replication)? Yes No

(If yes, please provide an evaluation report of the previous project in section J, if available.)

The Save project builds on the AfDB funded Shared Watercourse Support Project implemented by SADC through the Governments of Zimbabwe (and ZINWA) and Mozambique but would not be an extension of this project. The establishment of a fund for the Buzi Basin can be viewed as an extension of the already existing fund being implemented by the Sida funded Pungwe Transboundary Basin Water Management

Project. Communities within the Pungwe, Buzi and Save catchments have also received support for micro water projects before through NGOs, and governments. A GCF supported fund will also complement past attempts by Africa Development Bank (AfDB) to support small projects in Buzi and Save catchments at the transboundary scale. GCF supported interventions would be welcome in the sense that both Sida and AfDB have failed to satisfy the demand for funding of small projects as evidenced by the larger number of proposals received against the actual number of projects that were funded. The involvement of AfDB was supposed to end in June 2014 following a 6-month extension to facilitate completion of outstanding projects. However, since some of these projects have not taken off, it is not clear if they will be implemented at all. Again this is another window for GCF to continue from where AfDB has left off. The introduction of CBMPs had raised expectations of stakeholders and, yet, nothing has materialised on the ground. GCF support would therefore be instrumental in maintaining stakeholder engagement for the successful implementation of IWRM in all catchments. The projects will not only help communities to build resilience against climate change impacts, but will also improve general livelihoods in the catchments.

I. Remarks

J. Supporting Documents for Concept Note

- Map indicating the location of the project/programme
- Financial Model
- Pre-feasibility Study
- Feasibility Study (if applicable)
- Environmental and Social Impact Assessment (if applicable)
- Evaluation Report (if applicable)