I. Project Context

Country Context

Sustained and inclusive economic growth in the Southern African Development Community (SADC) can accelerate job creation, poverty reduction and access to basic services. Average GDP growth for sub-Saharan Africa is expected to continue rising in the near future. In 2013, the average regional rate of economic growth rose to 4.9%. By 2015 the rate is expected to reach 5.2%. Key economic drivers include export-oriented extractive industries, strengthened domestic macroeconomic policies, and investment into skills and health. With further integration of SADC Member States into the global economy comes access to more diversified capital, but also exposure to global volatilities, such as the slowdown of monetary stimulus. Translating the positive economic outlook into development outcomes require measures to create jobs and investment in human wellbeing. In several SADC Member States, such measures have resulted in progress toward the Millennium Development Goals over the past decades. For the region as a whole, however, sub-
Saharan Africa lags behind other countries in the speed of reducing poverty. Since 1990, extreme poverty rates in East Asia fell by 44 percentage points whereas in sub-Saharan Africa, the rate fell by eight points. Within the SADC region, human development varies equally. According to the UNDP Human Development Index, average life expectancy in Lesotho, the Democratic Republic of Congo and Swaziland is less than 48 years. On the other hand, in countries such as Namibia, the Seychelles and Mauritius, it is over 65 years. Similarly, access to basic services such as improved water sources (MDG7b) varies between Member States: from 47% in Mozambique to 64% in Zambia to 97% in Botswana.

Among different sources of water, groundwater is especially important for human wellbeing, livelihoods, food production, ecosystems, industries and growing cities in SADC. It is estimated that over 70% of the 250 million people living in the SADC region rely on groundwater as their primary source of water. Forty percent of the region’s population use informal or unimproved sources of water, which are often unsafe and prone to the effects of drought. Despite varying dependency on groundwater across SADC Member States, groundwater usually provides a critical buffer between dry and rainy seasons. The role of groundwater as key to economic growth is further exacerbated with the expansion of commercial farming and industries. The agricultural sector is the largest consumer of water using 83% of abstracted water. Twelve per cent of this water is generated from groundwater. In emergent capital cities, such as Lusaka and Gaborone, groundwater is the only source of water to meet the demand from expanding factories and growing urban populations. In response to such dependency, some SADC Member States are actively integrating groundwater into their water resource management policies and laws (e.g., Botswana and South Africa). On the whole, however, institutional frameworks to manage water at both national and transboundary levels do not feature groundwater prominently. In spite of unequal attention between surface water and groundwater, the economic role of the latter is significant. Economic valuation studies of groundwater undertaken by the SADC Secretariat have illustrated that the Kuseb, Swakop and Omaruru aquifers in Namibia, for example, have an estimated 25 year NPV valued at over US$1.3 billion (SADC, 2011).

**Sectoral and institutional Context**

There are, by and large, five types of groundwater provinces in the SADC region. These are: basement provinces, sedimentary basin provinces, volcanic provinces, high-relief folded mountain provinces, and local alluvial aquifers along rivers and coastlines. In hydrogeological terms, the known occurrence of groundwater systems is predominantly in sedimentary basins with isolated outcrops of crystalline rocks. Of the many groundwater systems, there have been over 37 transboundary aquifers identified in Africa, of which over half (approximately 20) are on mainland SADC. The southern Africa region also has 14 internationally shared river basins. Despite the inherent challenges of data, the region is estimated to have 2,491m³/capita/year in renewable groundwater resources (total of 647km³ in annual average) which is higher than either Europe or Asia.

Many future water-challenges facing SADC Member States have no administrative boundaries and cannot be fully resolved through sovereign action. In the next 25 years, the population of southern Africa is expected to double. Rapid economic growth is set to endure in the medium-term future. With such developments comes rising demand for water and greater pressures and reliance on groundwater. Pollution of aquifers is a growing concern where fertiliser-derived nutrients from expanding commercial agricultural activities have caused the contamination of localised aquifers. It
is also a concern where mining and factories degrade groundwater systems with the release of heavy metals and sulphates, while the widespread use of on-site sanitation in rural and urban areas contaminates shallow aquifers in fractured or karst bedrock with pathogens and nitrates. Reoccurring droughts of shallow groundwater cause social upheaval and lead to distressed ecosystems (over a third of SADC’s population lives in drought prone areas). In the driest areas, across south-western Africa, groundwater is often the only source of water bridging dry and rainy seasons. Groundwater is also essential for wildlife and other biota, often in regions that attract tourism such as the Okavango River Delta. The region is known for climatic variability that translates into reoccurring drought and flood conditions with varying frequency and magnitude - from the deserts of Namibia to the floodplains of Mozambique. The impact of climate change will further pose substantial challenges to water resource management. By 2050, temperatures are expected to rise by an average of 1.5-2.0°C in the north of the SADC region, and by 2.5-3.0°C in the south (compared to 1961-1990 average). Research indicates dramatic warming of the Indian Ocean, making monsoons 10-20% drier and droughts prolonged and more severe.

The inter-governmental organisation of the SADC has the goal of fostering cooperation and mutual benefit from shared waters among its 15 Member States. Recognising the important role of water in fostering economic growth, the SADC Member States signed the “Protocol on Shared Watercourse Systems in the SADC Region” in 1995. The Protocol was later replaced by the legally binding “Revised Protocol on Shared Watercourses” in 2000 with the objective “to foster closer cooperation for judicious, sustainable and coordinated management, protection and utilisation of shared watercourses”. In 2005, the SADC Regional Water Policy (RWP) was developed to provide strategic guidance and to incorporate principles of Integrated Water Resource Management (IWRM). The RWP lent particular emphasis to regional integration and cooperation between Member States and between water-related sectors. The operationalisation of the Revised Protocol and the RWP was agreed upon in the SADC Regional Strategic Action Plan for IWM (RSAP). The current SADC RSAP III (2011–2015) acknowledges the importance of groundwater to the region with a dedicated Groundwater Management Programme of Action (GMP, Programme No. 11). The GMP has four project interventions: policy and institutional frameworks; transboundary aquifer management; awareness raising; and regional cooperation and groundwater management.

At the river basin level, groundwater is considered part of ‘watercourses’ as is stated in the 2000 Revised SADC Protocol and mirrored in river basin agreements. River basin agreements also emphasise management issues such as control of abstraction, pollution control, protection of recharge area and shared management. The operationalisation of commitments to groundwater, however, is often superseded by surface water priorities. At the level of SADC Member States, groundwater generally does not feature prominently in national water laws, policies and strategies. A number of the SADC Member States have developed and endorsed National Adaptation Programmes for Action (NAPAs) where improvements to water resource management is broadly prioritised.

II. Proposed Development Objectives
To support sustainable management of groundwater at national and transboundary levels across SADC Member States.

III. Project Description
Component Name
Component A. Operationalisation of the SADC Groundwater Management Institute
Comments (optional)

Component Name
Component B. Strengthening institutional capacity for the sustainable management of groundwater in SADC.
Comments (optional)

Component Name
Component C. Advancing knowledge on transboundary and national groundwater
Comments (optional)

Component Name
Component D. Promoting groundwater infrastructure management and development
Comments (optional)

IV. Financing (in USD Million)

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For Loans/Credits/Others

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V. Implementation

The institutional responsibilities for the Project are aligned with treaties, protocols, mandates and strategic action plans of the Southern African Development Community. The SADC Secretariat is mandated with the strategic planning and management of SADC Programmes for the coordination and harmonisation of policies and strategies in Member States (SADC Treaty 1992, Article 14).

The SADC Secretariat in Gaborone, Botswana, through the Water Division of its Directorate for Infrastructure and Services, will be the custodian of the Project and recipient of the Grant. The SADC Water Division will provide strategic guidance and management throughout implementation. The vision of the SADC Water Division is “to attain the sustainably, integrated planning, development, utilisation and management of water resources that contribute to the attainment of SADC’s overall objectives of an integrated regional economy on the basis of balance, equity and mutual benefits for all member States”. The SADC Water Division chooses to achieve its vision and implement operational project activities through applying the subsidiarity principle agreed upon by the SADC Council of Ministers in 2004. The said principle aims to promote cost-effectiveness and sustainability of activities that promote implementation of the SADC Treaty and SADC Protocols (including the 2000 Revised Protocol on Shared Watercourses).
SADC Member States will provide guidance to the Project and be active through the Project activities and networks. The SADC Member States will provide strategic guidance for the Project through engagement in the SADC Subcommittee on Hydrogeology. These proposed arrangements build on those established under the SADC Groundwater and Drought Management Project completed in 2011. At the national level, focal points and groups will strengthen involvement and build on benefits deriving from project activities. Each Member State will designate a Focal Point for the Project. This person will facilitate national focal groups consisting of decision makers/planners, groundwater practitioners, researchers and others engaged in national groundwater issues. Because there are wider communities at national level who will be interested and can benefit from engaging in the project activities, it will be important that wider ‘networks’ are established and engaged. The Project would be able to guide building such networks by connecting with already established ones such as Water-Net or Global Water Partnership Networks and can utilise social media tools to spread information, facilitate building relations and encourage dialogue.

On behalf of the SADC Secretariat and Member States, the University of the Free State in Bloemfontein, South Africa, will host the Project and the SADC Groundwater Management Institute. The arrangements for a regional center of expertise in groundwater begun in 2007 through the SADC Groundwater and Drought Management Project on behalf of the Member States. After an open and competitive process the University of the Free State (UFS), through its Institute for Groundwater Studies (IGS) was selected by the SADC Subcommittee on Hydrogeology as the preferred hosting institution for the SADC GMI. Subsequently, the hosting arrangements were endorsed by the SADC Council of Ministers (2008), the SADC GMI Charter and Mandate were developed and endorsed, and a Business Plan was drafted. In June 2011, the SADC GMI was legally registered under South Africa’s Company Act, and Articles and a Memorandum of Association were notarially registered in South Africa.

VI. Safeguard Policies (including public consultation)

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Comments (optional)

VII. Contact point

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