

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: PIDA850

Project Name	Zambia Water Resources Development Project (P114949)
Region	AFRICA
Country	Zambia
Sector(s)	General water, sanitation and flood protection sector (100%)
Lending Instrument	Specific Investment Loan
Project ID	P114949
Borrower(s)	
Implementing Agency	
Environmental Category	B-Partial Assessment
Date PID Prepared/Updated	19-Feb-2013
Date PID Approved/Disclosed	20-Mar-2013
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Decision	

I. Project Context

Country Context

Zambia has enjoyed a decade of rapid economic expansion following a protracted period of low growth and declining per capita income. Despite recent gains serious challenges remain in ensuring broad based and sustainable economic growth. Moderate growth rates observed between 1964 and 1972 were largely fueled by rising copper prices rather than broad-based gains in productivity, and the economy stagnated in the 1980s and 1990s due to a highly inefficient degree of state control over the economy, particularly in the mining sector. A relatively stable external environment and improved macroeconomic policies, combined with a major debt reduction effort undertaken as part of the Heavily Indebted Poor Country (HIPC) and Multilateral Debt Relief Initiative (MDRI) amounting to approximately US\$6 billion, has seen sustained growth and afforded the country much-needed latitude to increase spending on priority development objectives. This has been complemented by a combination of prudent macroeconomic management, market liberalization and privatization efforts. Investments in the copper industry and related infrastructure have helped to spur economic growth to about six percent year on year since 2000.

Sustained growth and continued political stability have translated in to only modest improvements in livelihoods with a limited impact on poverty reduction. The national poverty rate declined from 68 percent in 1996 to 58 percent in 2006 but this was primarily due to reductions in urban poverty. Rural poverty remains at 77 percent, with a majority of the population dependent on subsistence

agriculture (though down from 84 percent in 1996). In the same period, urban areas have benefited from the high rate of economic growth, and as a result urban poverty fell to 27 percent in 2006 (from 41 percent in 1996). The sources and benefits of economic growth have been narrowly focused on capital-intensive industrial (mining and construction) and services sectors. The labor-intensive rural economy, conversely, has only experienced substantial growth in the last two years, thanks to good weather conditions rather than any structural increase in agricultural productivity. The concentration of growth and relative enrichment of the urban population has accentuated the income divide between the urban and rural economies. The urban-rural income divide is large and growing, and the Gini coefficient rose to 52.6 in 2006, from 47.4 a decade earlier. Zambia's rank in the UN Human Development Index for 2010 is 150 out of 169 countries.

Zambia needs to successfully diversify growth and consider issues of distributive justice and support to pro-poor sectors if the country is to make significant progress in achieving its poverty reduction goals. These aspirations are articulated in the country's 'Vision 2030' with the national development goal of reducing poverty and reaching middle income country status by 2030. The Government's strategy for inclusive growth and development is outlined in the National Development Plan. The Sixth National Development Plan (SNDP) for the period of 2011–2015 is based on "Sustained economic growth and poverty reduction". The strategic focus of the SNDP is "infrastructure and human development" with the objective of "accelerating infrastructure development, economic growth and diversification, to promote rural investment and accelerate poverty reduction and to enhance human development". The SNDP focuses on policies, strategies and programmes that will contribute significantly to addressing the challenges of realising broad-based pro-poor growth, employment creation and human development.. While recognizing the importance of balanced growth in all sectors of the economy, the SNDP priority growth sectors are Agriculture, Livestock and Fisheries, Mining, Tourism, Manufacturing, Commerce and Trade . Investment in rural areas is considered as an important means for increasing employment and reducing poverty within the plan. The plan therefore also promotes increased rural investment in infrastructure such as roads rail, information and communication technology, energy water and sanitation, education and health. It is further guided by principles of improved accountability, decentralized process and efficient resource allocation and mobilization.

II. Sectoral and Institutional Context

One of the challenges facing Zambia's economy is the vulnerability and increasing constraints derived from a number of water-related factors. Frequent droughts and floods, hydrological variability and seasonal water shortages, compounded by growing water demand from the major sectors of the economy and limited water infrastructure impose a serious constraint on the medium and long-term growth prospects. Mitigating the negative impacts of floods and droughts through development of a sound infrastructure platform to secure the productive use of water resources is central to continued economic development and safeguarding sustainable livelihoods. The lack of infrastructure in the water sector currently exposes the economy to significant risks that have the potential to undermine the recent gains. Recurrent floods and droughts over the past three decades are estimated to have cost Zambia US\$13.8 billion, a 0.4 percent annual loss of economic growth that disproportionately impacts the poor. Climate change is expected to increase the intensity of these events and further impact on the national economy. In the absence of investments in adaptation measures and an appropriate infrastructure platform, rainfall variability alone could keep an additional 300,000 more people below the poverty line and cost Zambia US\$4.3 billion in lost GDP over the next decade, reducing annual GDP growth by 0.9 percentage points and accentuating rural poverty.

Zambia has abundant arable land and water resources which, along with the generally favorable climatic and ecological conditions, provide great potential for the production of a variety of crops, livestock development and industrial growth. However, agricultural growth is reduced by one percentage point each year as a result of the lack of storage and rainfall variability. Whilst mining remains the mainstay of the economy and the primary source of national income as well as foreign exchange earnings, there is a unique opportunity for Zambia to develop its water resources as the necessary platform for sustainable growth and poverty reduction. Total renewable water resources in Zambia are estimated to be 105 km³ per year, more than 80 percent of which are produced internally and all of which contribute to internationally shared basins. The per capita water availability in Zambia is estimated at about 8,700 m³ per year, significantly higher than the average for Sub-Saharan Africa (7,000 m³ per person per year) and globally (8,210 m³ per person per year). In contrast, the level of per capita water withdrawal in Zambia is three times lower than the developing countries average and lower than the average per capita water withdrawal in Sub-Saharan Africa. Of the total water withdrawals of 1.7 km³ per year, agricultural water use accounts for 77 percent, domestic water use accounts for 16 percent while industries seven percent. Hydropower potential remains largely undeveloped, at 27 percent of the estimated 6000 MW. Of the arable land, less than 5 percent is under irrigation. Although abundant, access to water is limited by lack of human, institutional, and financial capital and there is a need to strengthen the systems to support development of a pipeline of sustainable infrastructure investments.

The apparent abundance of water at the aggregate national scale belies the fact that some basins are already under increasing pressure, with the potential to undermine growth and development. The Kafue River catchment is home to 40 percent of the national population, a majority of the mining investments and economic activity, and roughly 80 percent of the country's total area under irrigation. However, annual withdrawals of water for irrigation in the Kafue River are reaching the limits that can be sustained under the present storage capacity. The river also accounts for more than half of the country's hydropower production. This is expected to increase to over 70 percent with the projected investment of more than US\$3 billion in the development of the Itzhi-Tezhi and Kafue Gorge Lower hydropower plants. Although Government has retained a share holding in the operating entities for all three hydropower plants through the national utility, the operation of this cascade, combined with the impacts of climate change, increase the need for a strong mechanism for ensuring the optimal allocation of water. The increasing competition in the Kafue River is accentuated by the fact that more than 80 percent of the current domestic water supplies are derived from the Kafue River, with plans to double the capacity of the supply system for Lusaka from the Kafue River, and the presence of important wetland habitats recognized under the RAMSAR convention. Nature based tourism is estimated to contribute between six and ten percent to GDP. Given these contributions and the important role in providing sustainable rural livelihoods, there is a need to ensure adequate environmental flows for important habitats, such as the Kafue Flats. In the absence of increased storage capacity further irrigation expansion could lead to the sub-optimal allocation of water, substantial reductions in power production and economic losses for Zambia. These different, competing sectoral water demands, coupled with significant water quality concerns and associated health risks, are imposing increasing constraints on economic growth and there is a need to optimize the economic allocation of water and explore alternative water development incentives in other parts of the country.

All of Zambia's water resources form part of two major international river basins, the Zambezi River basin and the Congo River basin. This strategic geographic position in the upper reaches of

both these important catchments provides an important context for any water resources development. Zambia has played an important role in development of the Southern African Development Community (SADC) Revised Protocol on Shared Water Courses (2000) and is engaged in the process of developing co-operative mechanisms with riparian states. The Zambezi River, which accounts for 72 percent of Zambian territory, has seen a growing demand for both instream and abstractive uses of water from riparians to the basin as well as some beyond the basin, such as South Africa. These demands have implications on the opportunities for economic development in Zambia. The process to establish a Zambezi Watercourse Commission (ZAMCOM) initiated in 1993 has been realised with the ZAMCOM Agreement coming in to force with ratification by six of the riparians states and establishment of an Interim ZAMCOM Secretariat to assist the riparian states to operationalise the ZAMCOM Agreement and establish a permanent ZAMCOM Secretariat. Despite this progress Zambia remains the only riparian to have not signed the agreement and one of two that have not ratified.

The issues of localized, economic water scarcity have been accentuated by the governing legislation that dates back to 1949 and the colonial administration. Recognizing this, the Government initiated a series of reforms across the water sector in the 1990s. These were focused on introducing a more efficient framework based on contemporary principles of IWRM that acknowledges the river basin as the primary unit for sustainable water management and recognizes the value of water. The 1994 National Water Policy provided a progressive policy framework for the sector that recognized the need for separation of water resources management from that of water supply and sanitation . The National Water Policy was revised in 2008 to provide a contemporary vision and holistic direction for the water sector that aligns the institutional and legal framework with modern principles of water resources management. The revised Policy declares the principles of equitable access to water, priority use of water in satisfying human and environmental needs, and public ownership of the country's water resources. The Policy also states that poverty reduction should be addressed as a primary development goal in water management decisions, the catchment is the main water management unit, and Zambia's water resources shall be used, developed, and controlled in a sustainable manner for the benefit of present and future generations. Seventeen separate policy measures with 47 different objectives are outlined in the revised Policy. These objectives are supported by a number of recommended strategies.

In 2011 Zambia adopted a revised legal framework for water resources with approval of the "Water Resources Management Act 21 of 2011". This translates the provisions of the 2008 Policy into enforceable legal provisions that aim to maximize the economic beneficial use of Zambia's water resources in a more equitable and sustainable manner. The law introduces a modern approach to water resources management that introduces a new institutional arrangement tailored towards the objectives of Integrated Water Resources Management. Provisions of the Act comprise:

- An autonomous National Water Resources Management Authority (NWRMA) to replace the existing Water Board. The NWRMA will be responsible for all water resources management functions except policy formulation and guidance as well as issues relating to shared water courses (notably the Zambezi River);
- Catchment Councils and Sub-Catchment Councils (where feasible) substituting the present Provincial and District setups for water management;
 - Water User Associations, which should be formed on a demand driven basis;
 - A Water Resources Development Fund to make investments benefit the poor managed by an autonomous board with NWRMA as secretariat; and,

- A Department of Water Resources to substitute the present DWA and be responsible for policy formulation and guidance as well as international rivers.

The Government is implementing a step-wise approach to implementing the Act by advancing on numerous fronts and a parallel process is being established to capacitate the appropriate institutional framework. A number of prerequisite activities still need to be undertaken and subsidiary legislation is envisaged to enable rapid implementation of the provisions of the Act. An Integrated Water Resources Management and Water Efficiency Implementation Plan (IWRM&WEIP) was prepared with the intention of supporting the provisions of the Act. The IWRM&WE IP emphasizes the vital importance of water infrastructure development in reducing the uncertainty of access to water due to rainfall variability and water shocks and is intended to ensure that implementation of actions in the water sector are done in a coordinated, effective and efficient manner. The IWRM & WE IP outlines the Government's program toward a common approach for support to implementation of the provisions envisaged within the Act. Partnerships are central to the Government's vision within the IWRM & WE IP, building on the lessons learnt under the Water Resources Action Program that was supported by a wide range of partners between 1997 and 2011. The inclusion of provisions for establishing a Water Resources Development Fund is intended to provide a common framework for directing financial resources to rural infrastructure, improving transparency and efficiency in directing resources toward rural water resources infrastructure programs and ensuring sustainable outcomes.

III. Project Development Objectives

The Project Development Objective is to support the implementation of an integrated framework for development and management of water resources in Zambia.

IV. Project Description

Component Name

Component A. Water Resources Management

Component B. Water Resources Development

Component C. Institutional Support

V. Financing (*in USD Million*)

For Loans/Credits/Others	Amount
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	50.00
Total	50.00

VI. Implementation

The Water Resources Development Project (WRDP) will be implemented through the Ministry of Mines, Energy and Water Development (MMEWD) as the overall lead implementing and coordinating agency. Acknowledging that the Water Resources Management Act includes provisions for institutional re-organization, with the creation of a number of new entities, the focus of the project support will be towards consolidating the water resource development and management functions and not on the dedicated form. All entities will fall under the MMEWD and the arrangements are intended to allow flexibility to respond to changing institutional environment and meet the needs of the institutional configuration that evolves out the continuing reform process

with outputs readily transferable to the changing institutional arrangements.

The management framework shall comprise: a) The Water Sector Advisory Group to provide a multi-sector advisory and consultative platform to ensure coordination with other stakeholders and continued alignment with government priority programs; b) The Project Steering Committee (PSC) which will be the primary responsible entity and ensure policy and strategic guidance, direction and oversight; c) The Project Coordinator responsible for overall technical supervision and facilitate timely any official contacts /approvals the project may need; and d) a Project Technical Management Team led by the Project Manager will collectively lead on the planning and execution of the project. The detailed implementation arrangements are elaborated in Annex iii.

Project implementation will be supported by a project advisor and additional specialists as required from time to time, with support staff budgeted and financed under the Project. This will ensure that the projects operations and certain specialized tasks are executed by specialists with the required background and knowledge, including: (i) professional staff: an environmental and social safeguards, institutional experts, dam design and construction, water resources management; water resources information; economics water resources planning accountant or financial management specialist and procurement specialist; (ii) short term expertise may include: planning, monitoring and evaluation, irrigation engineering, dam design and construction engineers, catchment management, civil engineer, facilitators, water quality, legal expertise, international waters; information technology services, procurement and financial management specialist etc.; and (iii) annual external audits.

During project implementation, fiduciary and administrative capacity will be enhanced in MMEWD to carry out these functions and will be re-assessed at mid-term. The MMEWD will be responsible for financial management under a single Designated Account and centralized support for procurement services. All procurements under national competitive bidding procedures will be based on procedures acceptable to the Bank as stipulated in the Zambia Public Procurement Act No 12 of 2008 as amended by amendment No 15 of 2011 and the Statutory Instrument No 63 of 2011 “Procurement Regulations” and the accompanying National Standard Bidding Documents of November 2012. The institutional arrangements, roles and responsibilities will be as provided in the MMEWD procedures manuals which will need to include clear and accountable arrangements for decentralized procurement by Procuring Entities (PE) devoid of participation of the Zambia Public Procurement Authority (ZPPA) which comes into effect on January 01, 2013. All prior review procurement will be based on the Guidelines Procurement of Goods, Works and Non Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers January 2011 edition and Guidelines Selection and employment of Consultants under IBRD loans and IDA Credits and Grants by World Bank Borrowers January 2011 edition.

VII. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	x	
Natural Habitats OP/BP 4.04		x
Forests OP/BP 4.36		x
Pest Management OP 4.09	x	
Physical Cultural Resources OP/BP 4.11	x	
Indigenous Peoples OP/BP 4.10		x

Involuntary Resettlement OP/BP 4.12	x	
Safety of Dams OP/BP 4.37	x	
Projects on International Waterways OP/BP 7.50	x	
Projects in Disputed Areas OP/BP 7.60		x

VIII. Contact point

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