

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

Report No.: PIDA746

Project Name	Kihansi Catchment Conservation and Management Project (P126361)
Region	AFRICA
Country	Tanzania
Sector(s)	Forestry (50%), General water, sanitation and flood protection sector (40%), General agriculture, fishing and forestry sector (10%)
Theme(s)	Biodiversity (40%), Water resource management (30%), Other environment and natural resources management (20%), Environmental policies and institutions (10%)
Lending Instrument	Technical Assistance Loan
Project ID	P126361
GEF Focal Area	Biodiversity
Borrower(s)	MINISTRY OF FINANCE
Implementing Agency	National Environment Management Council
Environmental Category	B-Partial Assessment
Date PID Prepared/Updated	07-Aug-2013
Date PID Approved/Disclosed	12-Aug-2013
Estimated Date of Appraisal Completion	16-Aug-2013
Estimated Date of Board Approval	18-Sep-2013
Decision	

I. Project Context

Country Context

1. Over the past decade, Tanzania has experienced high levels of economic growth, around 7%, and has shown resilience to shocks. The main drivers of growth are manufacturing which grew at around 9% between 2003 to 2008, with exports -- mainly regional -- having grown by 17% annually since 2005; the service sector, including trade, transportation, and tourism, having grown at 8% over the past decade; and agriculture having grown at around 4% per year since 2000. The growth outlook for Tanzania continues to remain positive, although there are risks. The economy is estimated to grow by 6.4% in 2012, slightly lower than the previous year, mainly due to the energy crisis and high fuel prices. The ongoing drought has had a significant impact on energy and food security. The medium-term growth outlook remains positive with the growth rate projected to return to 7% over the next 3 to 4 years.

2. Despite the stable macroeconomic situation, poverty remains prevalent in the country. The proportion of the population living below the poverty line has stagnated at around 30% since 2001, and the average household reports an income 40% lower than the average for sub-Saharan Africa. To address prevalent poverty, the Government of Tanzania (GoT) finalized a five-year (2010/11–2014/15) national growth and poverty reduction strategy, MKUKUTA II in November 2010. MKUKUTA II is a medium-term plan that aims to achieve the goals of Tanzania’s Development Vision 2025 (TDV 2025) and the Millennium Development Goals (MDGs). The TDV 2025 proposes to make Tanzania a middle income country characterized by high quality livelihoods; peace, stability, and unity; good governance; a well-educated and learning society; and a strong and competitive economy by 2025.

II. Sectoral and institutional Context

Sectoral and institutional Context

3. With a surface area of 947,300 km² Tanzania is endowed with large areas of forests and woodlands, a great diversity of flora and fauna, and a variety of ecosystems including the highest mountain and three of the largest freshwater lakes in Africa, as well as globally important wetlands, coastal, and marine ecosystems. It is also home to multiple globally threatened and endangered plant and animal species. Tanzania’s natural resources contribute substantially to its economy including agriculture, wildlife, fisheries, forestry, tourism and mining.

4. However, the use of natural resources in Tanzania is characterized by low productivity, unsustainable resource management, and uncoordinated management. In addition, the wealth from natural resources has not translated into improved economic well-being for the majority of citizens, rather it has benefitted a small minority. Equity remains a huge challenge.

5. Among the many highly biologically rich ecosystems in Tanzania, freshwater ecosystems are of particular importance. Tanzania contains the highest diversity of endangered aquatic-dependent organisms of any East African nation, and twice that of any of its neighbors. Within Tanzania, the Kihansi catchment located in south central Tanzania within the Rufiji River basin is of particular global importance because of the unusually high numbers of critically endangered and highly endemic plant and animal species which occur here.

6. The design of the Kihansi Catchment Conservation and Management Project (KCCMP) builds substantially on the knowledge and experience gained under the Lower Kihansi Environmental Management Project (LKEMP) which closed on June 30, 2011. In 1994, the Government of Tanzania approved the construction of the Lower Kihansi Hydropower Plant. The cost of this 180MW facility was US\$272 million financed by the Government of Tanzania, the World Bank and the European Investment Bank, with significant contributions from the Governments of Norway, Sweden and Germany through their respective development agencies: the Norwegian Agency for Development Cooperation (NORAD), the Swedish International Development Cooperation Agency (SIDA), and the German Federal Institute (KfW). In 1996 detailed ecological impact assessment studies carried out as construction was underway, led to the discovery of five endemic plant and animal species, including the Kihansi Spray Toad (KST). The KST, a globally unique species from the *Nectophrynoides* genus of live-bearing toads is restricted to four spray wetlands, which total less than 2 hectares in size and are maintained by spray generated from waterfalls in the Kihansi Gorge immediately below the dam. In order to reduce the

adverse environmental impacts downstream of the Lower Kihansi Hydropower Plant and to help restore the Kihansi Gorge ecosystem, the World Bank approved LKEMP in 2001. The rationale for Bank support was to balance biodiversity conservation and development including water needs for power generation and environmental flows for ensuring ecosystem functions and to promote closer coordination in implementing national, water, energy and environmental policies.

7. LKEMP made important contributions by putting in place a foundation for a policy and regulatory framework for allocating water for the environment. The water use conflict at Kihansi as well as other multi-sectoral water use conflicts in the Pangani and Rufiji basins influenced the 2002 National Water Policy (NAWAPO) of Tanzania to adopt the concept of integrated water resource management which recognizes multi-sectoral uses of water and promoted water planning and development at a river basin level rather than an administrative or political boundary level as was done in the past. According to IUCN and the Bank, NAWAPO included innovative provisions recognizing environment as a legal use of water in the allocation priority and decision making process and the 2009 Water Resources Management Act supported implementation of NAWAPO. LKEMP provided support for preparing an Environmental Management Act, enacted in 2004, along with a series of important regulations, including the Environmental Impact Assessment and Audit Regulation (2005); Strategic Environmental Assessments regulation; Environmental Experts and Guidelines Regulation. Four environmental flow assessments have been carried out following passage of NAWAPO. A sound water policy is now in place in Tanzania to integrate environmental flow requirements in decisions related to water allocation. Coordination between the environmental and water resources management agencies has improved with the recognition of the environment as a user of water.

8. Under LKEMP Phases 1 and 2 and subsequent bridging support the following key results related to biodiversity conservation were achieved: (i) establishment of a healthy and reproducing Kihansi Spray Toad (KST) captive population – the largest captive population (> 6000) of any critically endangered or extinct-in-the-wild species, worldwide; (ii) the establishment of two amphibian captive breeding facilities in Tanzania and the training of staff, the first such facilities in Africa; (iii) restoration and maintenance of the spray wetland habitats through an artificial spray irrigation system; (iv) establishment and enforcement of a Final Water Right which legally guarantees a minimum flow of 1.5 – 2.0 m³/s to sustain biodiversity within the Kihansi Gorge. Jointly, this minimum bypass flows in combination with the artificial sprinkler system provided adequate environmental flows for the restoration of the Kihansi spray wetland so as to enable the reintroduction of the KST back to the gorge; (v) expansion and strengthening of the spray irrigation system to maintain the spray wetland habitat; (vi) development of an Updated Environmental Management Plan (EMP) for the Lower Kihansi Hydropower Plant; (vii) development and passage of the 2004 Environmental Management Act (EMA) and 10 implementing regulations; (viii) establishment of a new curriculum in Conservation Biology at the University of Dar es Salaam; (ix) training of 2 PhD and 2 MSc students in conservation biology; (x) development with support from IUCN/SSC of reintroduction guidelines for the KST; and (xi) initiation of the first reintroduction of an extinct-in-the-wild amphibian species worldwide. However, despite all the successes, there is still a need for continued actions in order to sustain biodiversity conservation in the Kihansi catchment.

9. As a result of the above achievements gained under LKEMP and the Bank's expertise and past support of environmental flow issues and biodiversity conservation in general and with the Kihansi catchment in particular, the Government of Tanzania has requested that the World Bank serve as

the GEF Implementing Agency for KCCMP.

10. The activities proposed under the GEF financing will extend and enhance the sustainability of the achievements of the LKEMP in mainstreaming conservation of critically endangered species and their habitat in the Kihansi catchment and in integrating downstream environmental flow assessment into river basin planning in Tanzania. Specifically, GEF financing will support enhancing environmental dimensions into the integrated water resource management and development framework under the Water Sector Development Project (WSDP). The WSDP is a multi-phased long-term program to implement the NAWAPO. It aims to strengthen water sector institutions across nine river basins in Tanzania for integrated water resource management and improving access to water supply. Phase one of WSDP is a \$1.2 billion sector wide program supported by the GOT and numerous agencies, including \$200 million IDA credit. WSDP also supports the preparation of IWRM plans in nine river basins and the preparation of priority high risk water resources development projects. The KCCMP will be piloting the integration of biodiversity conservation at both an operational and planning level into the WSDP. As part of this effort, KCCMP will continue the first reintroduction of an extinct-in-the-wild amphibian species worldwide following best scientific practices, and will be pioneering the in-situ control and mitigation of chytrid fungus, an exotic disease which has contributed to the extinction of more than 90 amphibian species worldwide. KCCMP will also support the development of uniform methods and procedures for conducting environmental flow assessments to inform river basin planning and water resources development.

II. Proposed Development Objectives

The proposed Project Development Objective (PDO) is to enhance biodiversity conservation in the Kihansi catchment. The project will complement as well as assist on-going efforts of key resource regulatory authorities to conserve critically endangered and highly endemic plant and animal species and their habitat in the Kihansi catchment.

III. Project Description

Component Name

Component 1: Institutional capacity building for the management of the Kihansi catchment.

Comments (optional)

Component Name

Component 2: Conserve endangered species in the Kihansi catchment.

Comments (optional)

Component Name

Component 3: Project Management.

Comments (optional)

IV. Financing (*in USD Million*)

Total Project Cost:	24.28	Total Bank Financing:	0.00
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Total Cofinancing:		Financing Gap:	0.00
For Loans/Credits/Others			Amount
BORROWER/RECIPIENT			18.30
Global Environment Facility (GEF)			5.98
Total			24.28

V. Implementation

A. Institutional and Implementation Arrangements

The institutional arrangements will build on the earlier successful arrangements under LKEMP and are as follows:

11. Steering Committee. Policy guidance and overall project oversight and supervision will be provided by the Steering Committee. The Steering Committee is comprised of the Permanent Secretaries from the Ministries responsible for: Environment, Natural Resources, Energy, Water, Agriculture, Finance and Regional Administrative Secretaries of Iringa and Morogoro.

Functions of Steering Committee are:

- i) To receive progress reports on the implementation of project components, in order to provide overall guidance on policy matters that relate to the Kihansi gorge.
- ii) To ensure that activities of individual sectors are included in the annual work plans in order to facilitate the smooth handing over at the end of the project life.

12. The Steering Committee will be chaired by the Permanent Secretary (PS) from the ministry responsible for environment and will meet twice a year to facilitate smooth implementation of activities.

13. Technical Advisory Committee (TAC). Technical guidance for this multi-sectoral project will be provided by a Technical Advisory Committee (TAC). The TAC constitutes representatives from key implementers, including VPO (Division of Environment), NEMC, TANESCO, MOW, MAFS, MNRT, and institutions such as TANESCO, TAWIRI, RBWO, UDSM, SUA and the District Executive Directors of the riparian districts of Kilombero, Mufindi and Kilolo. Members of the TAC will also have key project implementation responsibilities, and the project will provide support technical advice to support decision making at Steering Committee level. The Director General NEMC will be the Chairperson of the TAC. TAC will meet twice a year prior to the steering committee meeting

14. Functions of TAC are:

- a) To advise NEMC in conducting its coordination function;
- b) To provide technical guidance and oversight in implementing project activities;
- c) To undertake sectoral and cross-sectoral coordination of project activities;
- d) To ensure that project activities are integrated in sector plans and budgets;
- e) To assess and recommend technical expertise needed to implement various project activities;
- f) To make a close follow up of activities to ensure compliance of EMP;
- g) To oversee the reintroduction of the KST;

15. Project coordination. Project coordination will remain at the ministerial level with the Vice

President's Office (VPO). At implementation level, the National Environment Management Council (NEMC) will serve as the lead coordinating institution. NEMC has experience in the coordination of cross-sectoral activities as required for the proposed GEF project. A senior officer from its core staff will be appointed as Project Coordinator, who will report to the Director General of NEMC, through the Director of Environmental Planning and Research. Within each implementing institution, a focal person will be appointed to coordinate project activities within each sector.

Results Monitoring and Evaluation

16. The lead coordinating institution (NEMC), under the Project Coordinator will be responsible for monitoring and evaluation (M&E) and will report on project performance to the Technical Advisory Committee (TAC) through the Director of Environmental Planning and Research - NEMC. A detailed results framework for individual components shown in Annex 1 includes outcomes, indicators, and institutional arrangements for the data collection, analyses, and dissemination. The project will establish an appropriate M&E system to track progress against the set indicators to provide an overall assessment of project performance. Details of project components and proposed activity budget are provided in Annex 2. The overall monitoring of project progress will be achieved through quarterly reporting.

C. Sustainability

17. The VPO is the Ministry that is responsible for coordination of environmental issues whereas NEMC is both a regulatory and advisory body that deals with the compliance and enforcement as well as coordinating research on environmental issues. The RBWO is also a regulatory body with regards to water. This being a complex multi-sectoral project, a Technical Advisory Committee (TAC) will be established to ensure oversight and involvement of implementing institutions at various stages of the project execution. The project will increase institutional and human resource capacity at the district and sectoral levels. This will be complemented by activities to build awareness and support for conservation among national and local level stakeholders, strengthen the policy framework, share best practices, and build capacity in the management of biodiversity-rich sites in country.

18. The project will address barriers and constraints at all levels to ensure long-term environmental sustainability. Mainstreaming biodiversity into river basin planning in Tanzania under WCMP will be conducted via operational and planning level pilot activities in the Rufiji River basin. Catchment management activities in the Kihansi catchment are based on technologies and approaches that have already proved successful and sustainable in other areas within the country. The enhanced capacity to carry out and monitor the reintroduction of the Kihansi Spray Toad will have important spin-off effects in conserving other amphibian species both in country and globally. Mapping and monitoring of other endangered plant and animal species and their critical habitats following best scientific practices will help chart proper conservation measures for these other species.

19. The project will facilitate full participation of communities within the catchment and support sustainable livelihood alternatives that will be beneficial to the improvement of water quality and quantity. The Kihansi Catchment Management Plan will establish a road map and milestones, and close follow-up support will be provided to ensure achievement of management plan objectives. Activities supported under the Livelihoods Subcomponent will strengthen local

community capacity and improve their economic status in a conservation linked manner, thereby further strengthening local community involvement in and support for conservation objectives. Specific livelihood activities and catchment management practices should be able to provide longer terms benefits to the communities in terms of improved natural resource conditions and enhanced livelihoods. The project will promote the concept of payment for environmental systems, which will allow for the benefit sharing opportunities that go beyond the project scope between upstream communities and TANESCO.

VI. 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

Comments (optional)

VII. Contact point

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