



Kihansi Catchment Conservation and Management Project (P126361)

AFRICA | Tanzania | Environment & Natural Resources Global Practice |
Global Environment Project | Investment Project Financing | FY 2014 | Seq No: 8 | ARCHIVED on 25-Jun-2018 | ISR33036 |

Implementing Agencies: National Environment Management Council, MINISTRY OF FINANCE

Key Dates

Key Project Dates

Bank Approval Date:26-Sep-2013

Effectiveness Date:02-Dec-2013

Planned Mid Term Review Date:06-Jun-2016

Actual Mid-Term Review Date:06-Jun-2016

Original Closing Date:31-Dec-2018

Revised Closing Date:31-Dec-2019

Global Development Objectives

Global Environmental Objective (from Project Appraisal Document)

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.

Has the Global Environmental Objective been changed since Board Approval of the Project Objective?

No

Components

Name

Component 1: Institutional capacity building for the management of the Kihansi catchment:(Cost \$1.07 M)

Component 2: Conserve endangered species in the Kihansi catchment:(Cost \$4.61 M)

Component 3. Project Management:(Cost \$0.30 M)

Overall Ratings

| Name | Previous Rating | Current Rating |
|--------------------------------------|---------------------------|---------------------------|
| Progress towards achievement of PDO | ● Moderately Satisfactory | ● Moderately Satisfactory |
| Overall Implementation Progress (IP) | ● Satisfactory | ● Satisfactory |
| Overall Risk Rating | ● Moderate | ● Moderate |

Implementation Status and Key Decisions



Key activities under each component are progressing well and all the agreed actions from the last mission in October 2017 have been implemented. The project has embarked on the hiring of consultants for the two remaining studies: preparation of a financing plan for Kihansi catchment and development of guidelines for rivers and riverbanks management. Outcomes from these studies are expected to lead to the development of a long-term financing mechanism for conservation and applicable guidelines for managing river banks in Tanzania.

As part of the implementation of the project communication strategy, the project is preparing school awareness campaigns, which has been identified as one of the effective strategies to inform the communities and the general public about biodiversity conservation and the project in general to be ready by the World Environment Day. The project has also conducted meetings and educational tours to Kihansi for senior GoT officials, particularly the members of parliament. During this period, there has also been significant media coverage of the project, specifically on update about the progress with KST reintroduction plan.

Ecological monitoring and species survivorship experiments continued both in captive breeding facilities and in the KSTs natural habitat in the Kihansi gorge. A small KST population that was released since October 2012 continues to be observed both within and outside Enclosures 1 and 2 in the Upper Spray Wetland. Although this is an encouraging sign, more frequent releases of about 200+ KST back to the USW would be necessary to demographically and genetically rescue this small population.

Studies on population and distribution of wild coffee in the Kihansi gorge have indicated that there are more than 21,000 coffee plants in the Kihansi Gorge found at four locations in the Gorge with the highest percentage of plants (35%) found in vicinity of the lower Upper Spray Wetland. Wild coffee studies have generated very promising results, including: identification of significant and useful genetic diversity information; propagation methods; seasonal population dynamics; adaptation to environments other than Kihansi seems to be possible; and potential for domestication of wild coffee is very high. Research to establish other characteristics such as resistance to diseases and beverage values are in process.

All the processes required to declare Kihansi catchment an Environmental Protected Area which included installation of temporary beacons for the boundary of the proposed area (3471.66 Ha) have been almost been completed. However, the final steps are awaiting Government decision on interagency issues that need to be resolved before the boundary of the protected area can be formally finalized and gazetted as an Environmental Protected Area according to the Environmental Management law (EMA, 2004).

Integrated Pest Management Plan (IPMP) packages have been approved by the Ministry of Agriculture and the popular Kiswahili versions have been prepared. Although the IPMP packages were essentially prepared for the use of farmers in Kihansi Catchment, the Ministry of Agriculture has up-scaled the IPM packages be used as national IPM guidelines country-wide. This is a great credit to the project.

Identification of all 901 water sources has been completed and it has been established that 641 (71%) are in Mufindi, 216 (24%) are in Kilolo and 44 (5%) are found in Kilombero. Of the water sources identified and mapped, 96.2% were perennial and 3.8% were seasonal. 22.7% of perennial water sources were protected and 77.3% were not protected. Furthermore, 38.2% of seasonal water sources were protected and the remaining 61.8% were not protected. This makes the Kihansi catchment the first catchment in the country, whose water sources have been identified, mapped, demarcated and a management plan prepared.

**Risks****Systematic Operations Risk-rating Tool**

| Risk Category | Rating at Approval | Previous Rating | Current Rating |
|--|--------------------|-----------------|----------------|
| Political and Governance | -- | ● Moderate | ● Moderate |
| Macroeconomic | -- | ● Moderate | ● Moderate |
| Sector Strategies and Policies | -- | ● Moderate | ● Moderate |
| Technical Design of Project or Program | -- | ● Moderate | ● Moderate |



| | | | |
|--|----|---------------|---------------|
| Institutional Capacity for Implementation and Sustainability | -- | ● Substantial | ● Substantial |
| Fiduciary | -- | ● Moderate | ● Moderate |
| Environment and Social | -- | ● Moderate | ● Moderate |
| Stakeholders | -- | ● Moderate | ● Moderate |
| Other | -- | ● Substantial | ● Substantial |
| Overall | -- | ● Moderate | ● Moderate |

Results

Global Environmental Objective Indicators

▶ Total area in the Kihansi catchment protected for biodiversity conservation.(Hectare(Ha), Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 9,080.00 | 9,080.00 | 9,080.00 | 13,080.00 |
| Date | 24-Nov-2014 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Comments

The project has so far demarcated an area of 3471.66 Ha for the proposed Kihansi catchment an Environmental Protected Area, which will be allocated conservation status soonest as the Government resolved institutional mandate overlaps. The final decision on the protection status is expected by August 31, 2018.

▲ Endemic species (Nectrophrynoides asperiginis, Coffea kihansiensis, Charaxes mtui) conserved within the Kihansi catchment.(Number, Custom Supplement)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|----------|-------------------|------------------|------------|
| Value | 2.00 | 2.00 | 2.00 | 3.00 |



▷ Endemic species of KST, *Nectophrynoides asperiginis* conserved within the Kihansi catchment.(Number, Custom Breakdown)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 50.00 | 50.00 | 1,000.00 |
| Date | 24-Nov-2014 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

▷ Endemic species of wild coffee, *Coffea kihansiensis* conserved within the Kihansi catchment(Number, Custom Breakdown)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 21,000.00 | 21,000.00 | 21,000.00 | 21,000.00 |
| Date | 24-Nov-2014 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

▲ Host plants of a new butterfly, *Charaxes mtui* conserved within the Kihansi catchment.(Hectare(Ha), Custom Breakdown)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 0.00 | 0.00 | 200.00 |
| Date | 24-Nov-2014 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Overall Comments

A small KST population including animals that were released in October 2012 continue to survive in the Gorge both within and outside the two enclosures.

Findings from wild coffee-*Coffea kihansiensis* indicate that there are about 21,810 plants distributed in four locations in the Gorge. Propagation methods have been established and possibilities to adapt in other locations outside Kihansi Gorge seems possible.

The new butterfly species *Charaxes mtuiae* was formally described in a scientific publication appearing in *Entomologia Africana* (Collins et al 2017). To date, five permanent plots of the new butterfly species host plant *Diospyrus natalensis* have been established and 389 plants have been tagged to monitor the survival of this plant. The size class structure of the host plant suggests the population is either increasing or stable. Since April 2017, 33 butterfly traps have been deployed along an elevational gradient in the Kihansi Gorge. In additional sweep net surveys were conducted monthly. Over 177 species, including 23 species of *Charaxes*, and 2672 individual butterflies have been recorded over a nine-month period. *C. mtuiae*, however, has yet to be detected further illustrating its extreme rarity in the Kihansi Gorge. The search is going on.

Intermediate Results Indicators



► New areas outside protected areas managed as biodiversity-friendly (ha) (Number, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 9.00 | 9.00 | 9.00 | 5,500.00 |
| Date | 24-Nov-2014 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Comments

Out of 3471.66 ha already demarcated for the proposed Kihansi Environmental Protected Area (KEPA) only 285.489 ha (8.22%) is within the Njerera Forest Reserve. The ongoing exercise by the project to confirm the boundaries will determine the area which will be accorded protection.

► Direct project beneficiaries (Number, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 1,216.00 | 1,216.00 | 3,000.00 |
| Date | 24-Nov-2014 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

▲ Female beneficiaries (Percentage, Custom Supplement)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|----------|-------------------|------------------|------------|
| Value | 0.00 | 12.00 | 12.00 | 50.00 |

► Sustainable financing mechanism established based on payment for ecosystem services. (Yes/No, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | N | N | N | Y |
| Date | 24-Nov-2014 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Comments

A procurement process for engaging a consultant for the study to develop options for a sustainable financing plan for long term conservation and management of Kihansi Catchment is progressing well. This study will benefit from two previous studies: Economic



Valuation of Ecosystem Services from Kihansi Catchment and Economic Analysis of water use of Lower Kihansi Hydropower Plant.

► Legal establishment of national protected area (gorge, catchment and water sources) (Yes/No, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | N | N | N | Y |
| Date | 17-Jun-2016 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Comments

The survey of the proposed Environmentally Protected Area has been conducted in consultation with the surrounding communities in the 22 affected villages, and the beacons have been put in place. The final gazettement of the area cannot be finalized until land matters are resolved between government ministries, which has jurisdiction. These include the Tanzania Forest Services (TFS) under the Ministry of Natural Resources and Tourism; National Environmental Management Council (NEMC) under the Division of Environment, Ministry of Environment and Union Affairs and the Vice President's Office; and TANESCO which is under the Ministry of Energy and Industry.

► Catchment management plan developed and approved by Rufiji Basin Water Board. (Yes/No, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | N | Y | Y | Y |
| Date | 17-Jun-2016 | 10-Apr-2017 | 31-May-2018 | 31-Dec-2019 |

Comments

Kihansi Catchment Management Plan was approved in April by Rufiji Basin Water Board (RBWB). Implementation of the plan is on-going under supervision of LGAs and RBWB.



► Area of functioning spray irrigation system in the Gorge. (Hectare(Ha), Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 1.50 | 2.00 | 2.00 | 2.00 |
| Date | 17-Jun-2016 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

► Chytrid disease controlled (foot sterilization baths at entry points to the gorge and spray wetlands, biological control of Chytrid). (Yes/No, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | N | N | N | Y |
| Date | 17-Jun-2016 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

► Villages using integrated pest management strategies (cropping, use of pesticides). (Number, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 0.00 | 0.00 | 14.00 |
| Date | 17-Jun-2016 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Comments

Integrated Pest Management Plan (IPMP) packages have been approved and the popular Kiswahili versions have been prepared. Utilization of the IPMP packages will commence with by the next rain or cropping season.

► Important water sources managed in three districts that form Kihansi sub-catchment according to Kihansi Catchment Management Plan. (Percentage, Custom)

| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00 | 0.00 | 0.00 | 100.00 |
| Date | 17-Jun-2016 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Comments

Following the identification and mapping of water sources in the three riparian districts, RBWB and LGAs are working with the Water Users Associations to develop management plans for the important water sources.



► Operational guidelines for conducting environmental flow assessment developed and approved by National Environment Management Council and Ministry of Water. (Yes/No, Custom)


| | Baseline | Actual (Previous) | Actual (Current) | End Target |
|-------|-------------|-------------------|------------------|-------------|
| Value | N | N | N | Y |
| Date | 17-Jun-2016 | 19-Oct-2017 | 31-May-2018 | 31-Dec-2019 |

Overall Comments

The consultant study by Bureau of Industrial and Cooperation (BICO) of the University of Dar es Salaam to establish Environmental Water Requirement (EWR) of the Kihansi Gorge is at an advanced stage.

Data on Financial Performance

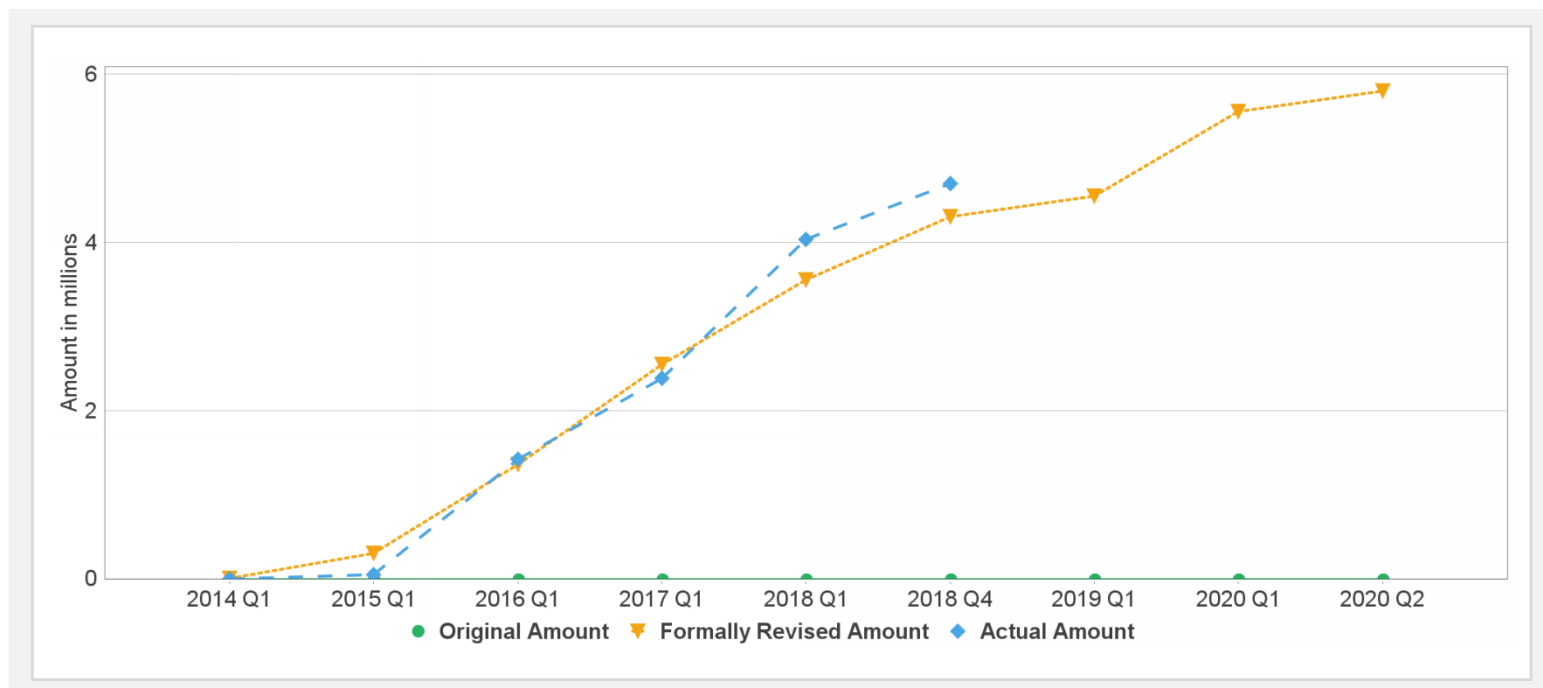
Disbursements (by loan)

| Project | Loan/Credit/TF | Status | Currency | Original | Revised | Cancelled | Disbursed | Undisbursed | Disbursed |
|---------|----------------|-----------|----------|----------|---------|-----------|-----------|-------------|---|
| P126361 | TF-15774 | Effective | USD | 5.98 | 5.98 | 0.00 | 4.70 | 1.28 |  79% |

Key Dates (by loan)

| Project | Loan/Credit/TF | Status | Approval Date | Signing Date | Effectiveness Date | Orig. Closing Date | Rev. Closing Date |
|---------|----------------|-----------|---------------|--------------|--------------------|--------------------|-------------------|
| P126361 | TF-15774 | Effective | 02-Dec-2013 | 02-Dec-2013 | 02-Dec-2013 | 31-Dec-2018 | 31-Dec-2019 |

Cumulative Disbursements



Restructuring History

Level 2 Approved on 23-Jun-2017

Related Project(s)

There are no related projects.