



Kariba Dam Rehabilitation Project (RI) (P146515)

AFRICA EAST | Eastern Africa | Water Global Practice |
IBRD/IDA | Investment Project Financing | FY 2015 | Seq No: 14 | ARCHIVED on 21-Sep-2021 | ISR47855 |

Implementing Agencies: Zambezi River Authority, The Republic of Zambia

Key Dates

Key Project Dates

Bank Approval Date: 09-Dec-2014

Effectiveness Date: 20-Aug-2015

Planned Mid Term Review Date: 16-Nov-2020

Actual Mid-Term Review Date: 09-Nov-2020

Original Closing Date: 28-Feb-2025

Revised Closing Date: 28-Feb-2025

Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The Project Development Objective is to assist in improving the safety and reliability of the Kariba Dam.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

Components Table

Name

Component 1: Institutional and Project Management:(Cost \$70.30 M)

Component 2: Plunge Pool Reshaping:(Cost \$99.30 M)

Component 3: Spillway Refurbishment:(Cost \$124.60 M)

Overall Ratings

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	<input type="checkbox"/> Moderately Satisfactory	<input type="checkbox"/> Moderately Unsatisfactory
Overall Implementation Progress (IP)	<input type="checkbox"/> Moderately Unsatisfactory	<input type="checkbox"/> Moderately Unsatisfactory
Overall Risk Rating	<input type="checkbox"/> Substantial	<input type="checkbox"/> High

Implementation Status and Key Decisions

The project remains significantly behind schedule with new delays expected. The implementation and financing arrangements of the project are complex due to the nature of the engineering works (including the discovery of unanticipated ground geotechnical conditions, resulting in design and construction complications) as well as the multiple sources of financing. In such context, robust action is needed to improve decision-making and avoid further delays. Some activities, especially related to recruitment of staff to support the project or contract modifications, have faced significant delays to be completed.

The ZRA has proactively managed the impacts of COVID-19 in the project and updated and disclosed the updated Environmental and Social Impact Assessment (ESIA) of the project.



Risks

Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Macroeconomic	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Sector Strategies and Policies	--	<input type="checkbox"/> Low	<input type="checkbox"/> Low
Technical Design of Project or Program	--	<input type="checkbox"/> High	<input type="checkbox"/> High
Institutional Capacity for Implementation and Sustainability	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Substantial
Fiduciary	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Environment and Social	--	<input type="checkbox"/> High	<input type="checkbox"/> High
Stakeholders	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Other	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Overall	--	<input type="checkbox"/> Substantial	<input type="checkbox"/> High

Results

PDO Indicators by Objectives / Outcomes

Number of people benefitting in the project area through risk reduction and avoided disaster				
▶ Number of people benefitting in the project area through risk reduction and avoided disaster (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	3,000,000 at risk from failure	Dam break analysis complete and EPP update underway.	Dam break analysis complete and EPP update underway.	3,000,000 people no longer at risk from failure
Date	27-Feb-2015	10-Feb-2021	10-Aug-2021	28-Feb-2025
Comments:	Successful completion of the rehabilitation works will improve the safety and remove the threat of risks to downstream populations			

Emergency Preparedness Plan adopted and operationalized				
▶ Emergency Preparedness Plan adopted and operationalized (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	No	No	No	Yes
Date	27-Feb-2015	10-Feb-2021	10-Aug-2021	28-Feb-2025
Comments:	Measures overall outcome in securing the safety of Kariba Dam through the restoration of operational curve governed by EPP. An update of the EPP is underway and will be completed prior to plunge pool dewatering. It will be updated again and finalized based on post-works conditions at the dam.			

Intermediate Results Indicators by Components

Component 1: Institutional and Project Management				
▶ Emergency Preparedness Plan Updated (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Existing EPP limits operations due to dam safety concerns	EPP to be further revised in anticipation of the commencement of the plunge pool works	EPP is being further revised in anticipation of the dewatering of the plunge pool and the commencement of the excavation and reshaping works	Updated EPP adopted and operationalized
Date	27-Feb-2015	10-Feb-2021	10-Aug-2021	28-Feb-2025
Comments:	Monitors progress in updating information for improvements to the EPP			
▶ Dam Break Analysis Completed and Integrated into the EPP (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Limited information available	Dam break analysis completed.	Dam break analysis completed.	Flood inundation and risk maps integrated into EPP
Date	27-Feb-2015	29-May-2020	29-May-2020	28-Feb-2025
Comments:	Monitors progress in updating information for improvements to the EPP			

Component 2: Plunge Pool Reshaping				
▶ Plunge Pool: Volume Excavated (Cubic Meter(m3), Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	300,000.00
Date	27-Feb-2015	10-Feb-2021	10-Aug-2021	30-Dec-2024
Comments:	Measures improved safety through physical interventions and stability of plunge pool. The construction of piers 2 to 5 of the cofferdam has been completed. Excavation for piers 6 to 8 is completed and concreting of the foundation for these three piers is underway. Plunge Pool dewatering (to begin excavation and reshaping) is not foreseen to commence before late 2022.			



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Component 3: Spillway Refurbishment				
► Spillway: Gates Refurbished (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0 gates refurbished	Fabrications of BIP and Needle Cofferdam underway	Fabrication of the stop beams, and needle cofferdams is complete with stop beams and cofferdam one on site and delivery of cofferdam two in progress at the time of the mission. Built-in parts fabrication is ongoing.	6 gates refurbished
Date	27-Feb-2015	10-Feb-2021	10-Aug-2021	28-Feb-2025
Comments:	Measures improved reliability through improved operations via refurbishment of the spillway			
► Spillway: Rule Curve (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Rule curve reduced by 3.5m	The rule curve will be reviewed and revised as part of the ongoing process of the preparation for the works.	Due to ongoing works, the rule curve remains reduced by 3.5m	Rule curve restored to full supply level
Date	27-Feb-2015	10-Feb-2021	10-Aug-2021	28-Feb-2025
Comments:	Measures impact of improved safety of the plunge pool and reliability of the spillway through restoration of full operational capacity reflected in the operating rule			

Performance-Based Conditions

Data on Financial Performance

Disbursements (by loan)

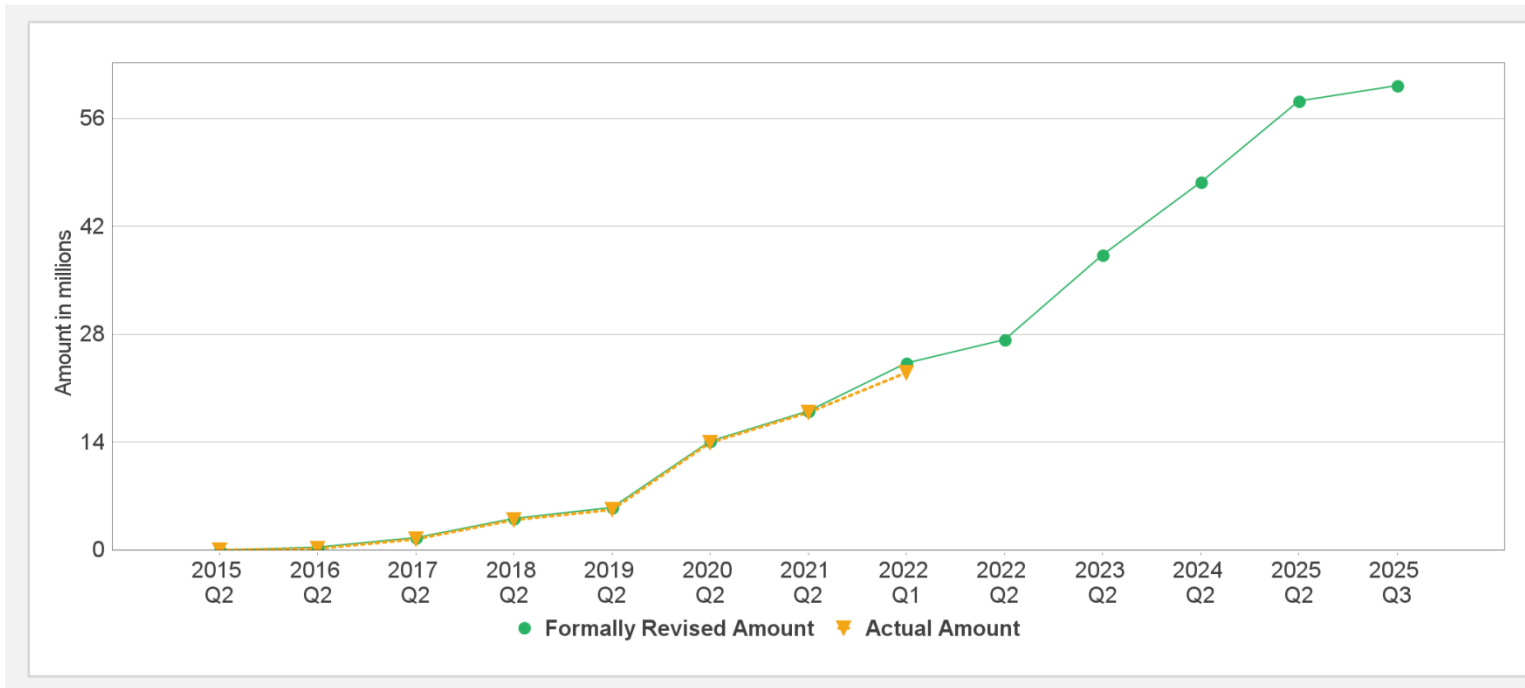
Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P146515	IDA-55630	Effective	USD	75.00	75.00	0.00	11.89	59.91	17%
P146515	TF-19029	Effective	USD	20.00	20.00	0.00	11.09	8.91	55%

Key Dates (by loan)



Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P146515	IDA-55630	Effective	09-Dec-2014	20-Feb-2015	20-Aug-2015	28-Feb-2025	28-Feb-2025
P146515	TF-19029	Effective	09-Dec-2014	20-Feb-2015	20-Aug-2015	30-Sep-2019	30-Jun-2022

Cumulative Disbursements



PBC Disbursement

PBC ID	PBC Type	Description	Coc	PBC Amount	Achievement Status	Disbursed amount in Coc	Disbursement % for PBC
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Restructuring History

Level 2 Approved on 27-Sep-2019

Related Project(s)

There are no related projects.