



## GEF Mainstreaming Integrated Water and Environment Management (P145897)

EAST ASIA AND PACIFIC | China | Water Global Practice |  
Global Environment Project | Investment Project Financing | FY 2016 | Seq No: 11 | ARCHIVED on 30-Dec-2021 | ISR49679 |

Implementing Agencies: The People's Republic of China, The Ministry of Water Resources (MWR), The Ministry of Ecological Environment (MEE), Water Resources Department in Hebei Province, Chengde Ecological Environment Bureau

**Key Dates****Key Project Dates**

Bank Approval Date: 09-May-2016

Effectiveness Date: 27-Mar-2017

Planned Mid Term Review Date: 30-Nov-2020

Actual Mid-Term Review Date: 24-Nov-2020

Original Closing Date: 31-Dec-2021

Revised Closing Date: 31-Dec-2021

**Project Development Objectives**

Project Development Objective (from Project Appraisal Document)

The Project Development Objective (PDO) is to increase water productivity and reduce pollution discharges in the project areas to mainstream and scale up an innovative approach to integrated water and environmental management in the three river basins entering the Bohai Sea.

The PDO will be achieved through: (a) increasing irrigation water use efficiency and all other ways possible to effectively use water under a cap of water consumption; (b) reducing water pollution discharges under a cap of environment capacity and (c) increasing ecological river flows. The above measures will minimize the negative impacts on the ecosystem of Bohai Sea, contributing to the achievement of global environmental benefits (GEBs).

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

No

**Components Table**

Name

Component 1: Mainstreaming of Innovative Approach on Integrated Water and Environment Management:(Cost \$3.45 M)

Component 2: Demonstration in Hai Basin on Integrated Water and Environment Management:(Cost \$90.10 M)

Component 3: Scaling up the Integrated Water and Environment Management Approach in Three River Basins:(Cost \$7.30 M)

Component 4: Institutional Capacity Building and Project Management:(Cost \$3.65 M)

**Overall Ratings**

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

**Implementation Status and Key Decisions**



All of the PDO indicators have been reached or exceeded based on the M&E report updated in October 2021. Based on the updated procurement plan, there are totally 71 contracts have been signed and implemented under this project and will be fully completed together with all other project activities by December 31, 2021 of the Project Closing Date.

Component 1 - Mainstreaming of Innovative Approach on Integrated Water and Environment Management (IWEM): by November 30, 2021, thirteen (13) out of 14 study reports planned under this component has been fully completed. The remaining one study report on Technical Guidelines for 3E (Evapotranspiration, Environment Capacity and Ecological Service) - based Integrated Water and Environment Management (IWEM) are under final review with comments and revisions and will be fully completed by the closing date. Altogether 11 policy recommendations based on the results of the studies have been included in the policy papers issued by MWR and MEE, which exceeded the target set at appraisal by seven (7).

Component 2 - Demonstration in Hai Bain on IWEM: 100% of the demonstration activities for this component has been completed. In the demonstration areas of Cheng-De and Shi-Jia-Zhuang, there have been reductions of 14,695 tons of COD and 1,598 tons of NH<sub>3</sub>-N from zero baseline; the average water productivity increased from 1.26 baseline to 1.82 kg/m<sup>3</sup>; and reduction of 169.29 million cubic meters of groundwater overdraft from zero baseline. The above actuals all exceeded the targets, respectively.

Component 3 - Scaling up the 3E-based IWEM Approach in Three River Basins: 100% of the project activities for this component has been completed. This approach has been scaled up by MWR in Shi-Jin Irrigation Scheme of Hai River Basin and He-Tao Irrigation Scheme of Yellow River Basin, and by MEE PMO in Xing-Tai, Tang-Shan and Lang-Fang of Hai River Basin and Liao River Basin. The approach has covered the problem areas of 181,629 km<sup>2</sup>, which exceeded the planned problem areas (153,800 km<sup>2</sup>) defined by MWR and MEE at project appraisal. Particularly, the 3E-based IWEM approach has been introduced and used for the project design during the recent preparation of the Bank's new lending program – Yellow River Resilience Program which includes Henan and Shaanxi provinces and a river basin component at the Basin level.

Component 4 - Institutional Capacity Building and Project Management: 100% of the project activities has been completed for this component. Training, workshops and domestic and overseas study tours as planned (or replacement of the activities due to epidemic situation with COVID-19) have been conducted to strengthen the institutional capacity in the PMOs of MEE, MWR and Hebei Province as planned. The next ICR mission is tentatively planned in March 2022.

## 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	<input type="checkbox"/> Low
Macroeconomic	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low
Sector Strategies and Policies	<input type="checkbox"/> Low	<input type="checkbox"/> Low	<input type="checkbox"/> Low
Technical Design of Project or Program	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low
Institutional Capacity for Implementation and Sustainability	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low
Fiduciary	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low
Environment and Social	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low
Stakeholders	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low
Other	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Overall	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low

## Results

### PDO Indicators by Objectives / Outcomes

PDO Indicators



<b>► 1. Policy Recommendations made under the project incorporated into the policies on water consumption control issued by MWR, and on pollution control issued by MEP, respectively (measuring unit: the (Number, Custom))</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	4.00	11.00	4.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 2-A. Water pollution (COD) discharged into the Hutuo and Luan Rivers reduced in the two demonstration areas Chengde and Shijiazhuang (measuring unit: tons of COD) (Metric tons/year, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	13,892.00	14,695.00	8,074.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>□ 2-B. Water pollution (NH3-N) discharged into the Hutuo and Luan Rivers reduced in the two demonstration areas Chengde and Shijiazhuang (measuring unit: tons of NH3-N). (Metric tons/year, Custom Breakdown)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1,471.00	1,598.00	547.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>□ 2-C. Water pollution discharged into the Hutuo and Luan Rivers reduced in the two demonstration areas Chengde and Shijiazhuang (measuring unit: tons of TN). (Metric tons/year, Custom Breakdown)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	500.00	924.00	670.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>□ 2-D. Water pollution discharged into the Hutuo and Luan Rivers reduced in the two demonstration areas Chengde and Shijiazhuang (measuring unit: tons of TP). (Metric tons/year, Custom Breakdown)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	64.00	176.00	85.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 3-A. Water productivity increased in two demonstration rural areas Gaocheng and Jinzhou (measuring unit: kg of grain production per/m3). (Cubic Meter(m3), Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	1.10	1.97	1.82	1.26
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>□ 3-B. Water productivity increased in scaling-up areas in Shijin irrigation areas (measuring unit: kg of grain production /m3) (Cubic Meter(m3), Custom Breakdown)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	1.19	1.98	1.83	1.29
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
□3-C. Water productivity increased in scaling-up areas in Hetao irrigation areas (measuring unit: kg of grain production /m3) (Cubic Meter(m3), Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	1.10	1.98	2.31	1.26
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
▶4. Reductions achieved in overdraft of groundwater in 2 demonstration sites in Hai River Basin (Gaocheng and Jinzhou) (measuring unit: million m3/year). (Cubic meters/year, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	169.28	169.29	72.93
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
Comments:	Government has been making greater efforts on reduction of groundwater exploitation in the project areas.			
▶5-A. IWEMP approach demonstrated and scaled up to cover the MWR defined problem areas in 3 river basins (measuring unit: km2) (Square kilometer(km2), Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	22,736.00	28,928.00	28,420.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
□5-B. IWEMP approach demonstrated and scaled up to cover the MEP defined problem areas in 3 river basins (measuring unit: km2) (Square kilometer(km2), Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	110,000.00	152,701.00	125,380.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021

### Intermediate Results Indicators by Components

Component 1: Mainstreaming of Innovative Approach on Integrated Water and Environment Management				
▶1-A. All study reports prepared and completed as planned with good quality (measuring unit: the number of study reports prepared, revised and completed with good quality) (GEF Financed) (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	4.00	4.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021



<input type="checkbox"/> 1-B. All study reports prepared and completed as planned with good quality (measuring unit: the number of study report prepared, revised and completed with good quality) (Government Financed) (Number, Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	5.00	5.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<input checked="" type="checkbox"/> 2. Operational manuals/guidelines completed and accepted with good quality (measuring unit: the number of operational manuals prepared, revised and completed with good quality) (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	4.00	5.00	5.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
Component 2: Demonstration in Hai Basin on Integrated Water and Environment Management				
<input checked="" type="checkbox"/> 3-A. All study reports prepared and completed as planned with good quality (measuring unit: the number of study reports prepared, revised and completed with good quality) (GEF Financed) (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	7.00	10.00	10.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<input type="checkbox"/> 3-B. All study reports prepared and completed as planned with good quality (measuring unit: the number of study reports prepared, revised and completed with good quality) (Government Financed) (Number, Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	7.00	10.00	10.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<input checked="" type="checkbox"/> 4-A. RS/ET/EC-based TVAPs prepared and implemented with good quality for Luan sub-river basin and Hutuo sub-river basin, respectively (TVAP GEF Financed). (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	2.00	2.00	2.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<input type="checkbox"/> 4-B. RS/ET/EC-based the IWEMPs prepared and implemented for Chengde Municipal City and Shijazhuang Municipal City and extension plans prepared for scaling-up areas (the IWEMP, MTR and ICR GEF Financed) (Number, Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	6.00	6.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	31-Dec-2021
<input checked="" type="checkbox"/> 5. Capacity building for citizen engagement in preparation of TVAPs and IWEMPs - Channels are institutionalized for citizens to engage with government agencies and other stakeholders. (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	0.00	6.00	8.00	8.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 6. Women participation to increase water productivity and reduce water pollution through WUAs during IWEMP implementation (measuring unit: increased percentage of female membership in the WUAs) (Percentage, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	30.00	45.00	50.00	50.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 7-A. Construction of 3 small wastewater treatment plants and pipelines, 2 in Chengde County and 1 in Kuancheng County with good quality in demonstration areas as planned (Wastewater pollution-N) (Tones/year, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1,602.00	2,855.90	2,136.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>□ 7-B. Construction of 3 small wastewater treatment plants and pipelines, 2 in Chengde County and 1 in Kuancheng County with good quality in demonstration areas as planned (Wastewater pollution-P) (Tones/year, Custom Breakdown)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	227.00	330.00	303.60
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>□ 7-C. Construction of 3 small wastewater treatment plants and pipelines, 2 in Chengde County and 1 in Kuancheng County with good quality in demonstration areas as planned (Wastewater pollution-BOD) (Tones/year, Custom Breakdown)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	2,010.00	2,830.00	2,796.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 8. Improved irrigation technologies applied in 2 demonstration counties in Shijiazhuang Municipal City (measuring unit: No. of hectares of irrigated areas applied with improved irrigation technologies) (Number, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	2,660.00	11,000.00	17,938.00	13,300.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>Component 3: Scaling up the Integrated Water and Environment Management Approach in Three River Basins</b>				
<b>► 9-A. All study reports prepared and completed as planned with good quality (measuring unit: the number of study reports prepared, revised and completed with good quality) (GEF Financed) (Number, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	6.00	7.00	7.00
Date	30-Jan-2017	11-Dec-2020	19-Dec-2021	30-Jun-2021



□9-B. All study reports prepared and completed as planned with good quality (measuring unit: the number of study reports prepared, revised and completed with good quality) (Government Financed) (Number, Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	4.00	4.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
▶10. National Water Environment Technology Extension Platform established at the MEP (measuring unit: percentage of software development and study progress completed with good quality) (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	80.00	100.00	100.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
▶11. National ET Monitoring and Management Platform established at the MWR (measuring unit: percentage of software development and study progress completed with good quality) (GEF Financed) (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	80.00	100.00	100.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
▶12-A. Annual scaling-up activities carried out and inspection and assessment reports prepared and completed for the up-scaling areas for MEP (GEF Financed) (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	4.00	6.00	6.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
□12-B. Annual scaling-up activities carried out and inspection and assessment reports prepared and completed for the up-scaling areas for the MWR (GEF Financed) (Number, Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	4.00	6.00	6.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>Component 4: Institutional Capacity Building and Project Management</b>				
▶13. Establishment of project website according to IW: LEARN guidelines: (measuring unit: functioning website with the number of hits recorded by site) (GEF Financed) (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1.00	1.00	1.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
▶14. Preparation of project-related experience notes (2) and one results note (1) for IW: LEARN portal: (measuring unit: completed documents) (GEF Financed) (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	0.00	2.00	3.00	3.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 15. Establishment and made operational project monitoring and evaluation (M&amp;E) system: (measuring unit: functioning M&amp;E system capable to generate semi-annual M&amp;E reports) (GEF Financed) (Number, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	1.00	6.00	10.00	10.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 16. Female staff and specialists participation in the project workshops and training at the central, provincial, municipal and county levels (increased % of female staff &amp; specialists of the total num (Percentage, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	30.00	40.00	50.00	40.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021
<b>► 17. Cooperation Framework Agreement reached to facilitate the development and implementation of TVAP/IWEMP between the respective administrative units responsible for environment and water at all leve (Number, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	4.00	5.00	5.00
Date	30-Jan-2017	15-Jun-2021	15-Jun-2021	30-Jun-2021
<b>► 18. Coordination meetings between the respective administrative units to support the implementation of the framework agreements at the three levels on an annual basis (GEF Financed) (Number, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	4.00	20.00	24.00	24.00
Date	30-Jan-2017	15-Jun-2021	19-Dec-2021	30-Jun-2021

## Performance-Based Conditions

### Data on Financial Performance

#### Disbursements (by loan)

Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P145897	TF-A2428	Effective	USD	9.50	9.50	0.00	8.65	0.85	91%

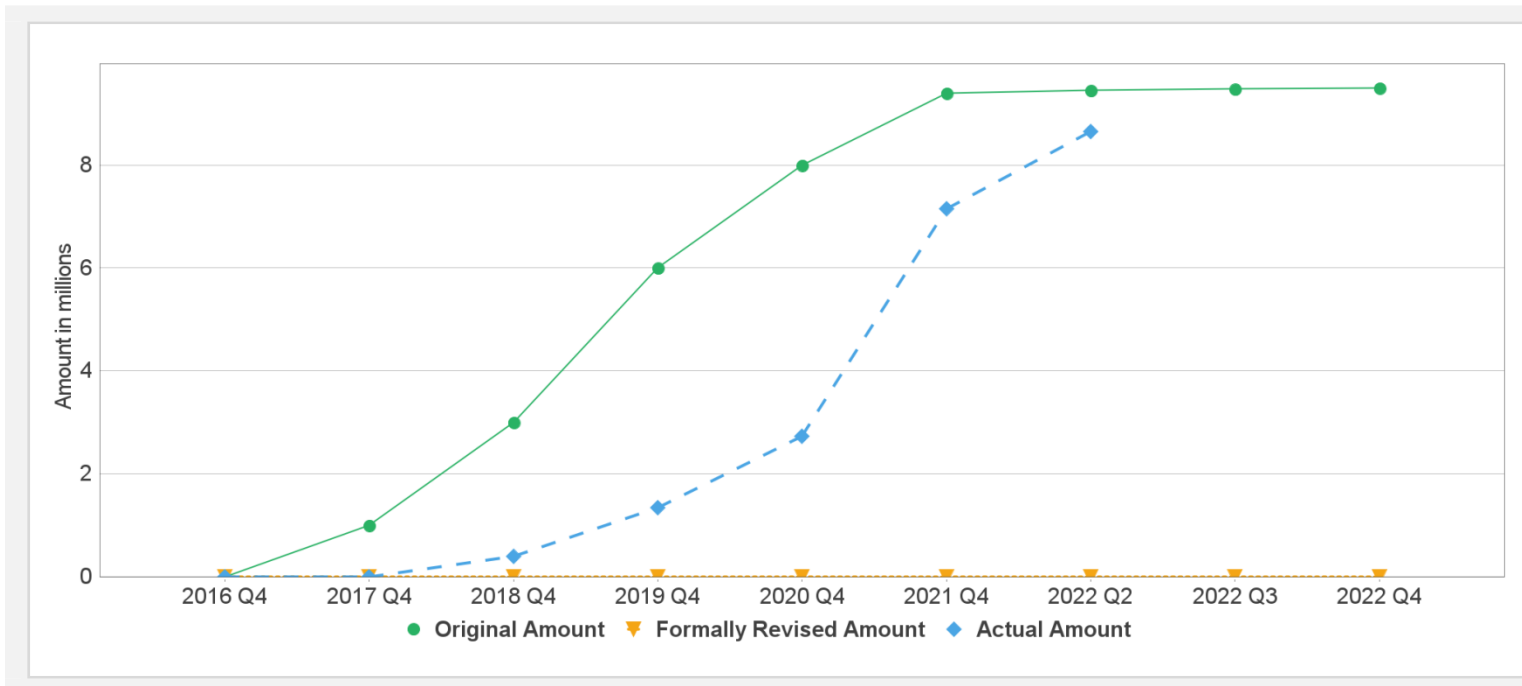
#### Key Dates (by loan)

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P145897	TF-A2428	Effective	29-Sep-2016	29-Sep-2016	27-Mar-2017	31-Dec-2021	31-Dec-2021





## Cumulative Disbursements



## Restructuring History

There has been no restructuring to date.

## Related Project(s)

There are no related projects.