Central Asia Hydrometeorology Modernization Project (P120788)

EUROPE AND CENTRAL ASIA | Central Asia | Social, Urban, Rural and Resilience Global Practice Global Practice |
IBRD/IDA | Investment Project Financing | FY 2011 | Seq No: 12 | ARCHIVED on 27-Dec-2017 | ISR31099 |

Implementing Agencies: Tajikhydromet, Kyrgyzhydromet, Ministry of Finance, EC-IFAS Regional Center for Hydrology (RCH)

Key Dates

Key Project Dates

Bank Approval Date:26-May-2011
Effectiveness Date:11-Nov-2011
Planned Mid Term Review Date:06-Oct-2014
Actual Mid-Term Review Date:17-May-2014
Original Closing Date:31-Aug-2016
Revised Closing Date:30-Jun-2018

Project Development Objectives

Project Development Objective (from Project Appraisal Document)
The objective of the Central Asia Hydrometeorology Modernization Project (CAHMP) is to improve the accuracy and timeliness of hydromet services in Central Asia, with particular focus on Kyrgyz Republic and Republic of Tajikistan.

Has the Project Development Objective been changed since Board Approval of the Project Objective?
No

Components

Name
Component A: Strengthening regional coordination and information sharing.:(Cost $8.70 M)
Component B: Strengthening of Hydromet Services in Kyrgyz Republic.:(Cost $6.00 M)
Component C: Strengthening of Hydromet Services in Republic of Tajikistan.:(Cost $13.00 M)

Overall Ratings

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	Satisfactory	Satisfactory
Overall Implementation Progress (IP)	Satisfactory	Satisfactory
Overall Risk Rating	Moderate	Substantial

Implementation Status and Key Decisions

Public Disclosure Copy

Public Disclosure Authorized

CAHMP has played a key role in enhancing collaboration, information sharing and capacity building among four NMHSs in Central Asia. The project has made substantial progress in strengthening regional collaboration and institutional capacity of the four involved NMHSs. Through joint capacity building such as forecaster training, NMHS technical staff have developed operational relationships for collaboration, mutual support and recognition of the regional and national benefits of data sharing. The Project has also provided a management-level platform for Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan to closely collaborate, build consensus on forward-looking enhancements and agree the aspects of weather/climate and hydrological information services that need to be managed with a regional dimension. For example, the four countries are collaborating on operational regional numerical weather prediction, using global and regional resources and expertise to improve national weather forecasting under the Severe Weather Forecasting Demonstration Project in Central Asia (SWFDP-CA).

KyrgyzHydromet and TajikHydromet are improving their services and therefore their utility for government ministries, partners and the public. Within KyrgzyHydromet and TajikHydromet, mindsets and perceptions have gradually shifted from a traditional government scientific agency approach focusing on technical activities, to a more user-oriented service provider approach, increasingly focusing on understanding and meeting user information needs. Promoting this cultural shift, the Project has supported activities such as preparation and subsequent approval of business development plans for KyrgyzHydromet and TajikHydromet, which have further improved the potential for sustainability. In both cases, the statuses and budgets of these agencies have increased during project implementation, indicating improved recognition by government, in response to improved performance. In addition, KyrgyzHydromet and TajikHydromet are now able to contribute more information and expertise to regional efforts, for example leading the identification of regional capacity building needs for certain themes under the Bank's Strengthening Early Warning of Mountain Hazards in Central Asia (P158373) technical assistance project.

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	--	Substantial	Substantial
Technical Design of Project or Program	--	Substantial	Substantial
Institutional Capacity for Implementation and Sustainability	--	Substantial	Substantial
Fiduciary	--	Moderate	Moderate
Environment and Social	--	Low	Low
Stakeholders	--	Substantial	Substantial
Other	--	--	--
Overall	--	Moderate	Substantial

Results

Project Development Objective Indicators

▸ Increased accuracy of river flow forecasts (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	KgHM 62% TjHM 64%	KgHM: 83% TjHM: 75%	KgHM: 83% TjHM: 75%	KgHM: 85% TjHM: 80%
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ Increased accuracy and timeliness of basic weather forecasts (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	76% for KgHM and 66% for TjHM	KgHM: 94.7% TjHM: 85%	KgHM: 94.7% TjHM: 85%	KgHM: 85% TjHM: 85%
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ Timeliness of weather forecast data (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	KgHM: 2.80 TjHM: 2.90	KgHM: 3.81 TjHM: 4.26	KgHM: 3.81 TjHM: 4.26	1. Timeliness of weather forecast data: Kyrgyz Hydromet: Tajikhydromet - 2. User satisfaction: Kyrgyz Hydromet: Tajikhydromet -
Date	17-Jun-2016	01-Dec-2017	01-Dec-2017	29-Jun-2018

Overall Comments

Intermediate Results Indicators

▸ (Comp B: Kyrgyz Republic, IRI 4) Increased institutional strength and sustainability of Kyrgyzhydromet (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Existing legal structure, operating procedures and staffing are inadequate to meet KgHM mission#s needs. Investment and O&M needs far exceed KgHM budgets.	KgHM prepared a list of operational guidelines necessary for operations in light of modernized infrastructure; the terms of reference to draft these is being developed.	KgHM prepared a list of operational guidelines necessary for operations in light of modernized infrastructure; the terms of reference to draft these is being developed.	KgHM new regulations and operational guidelines developed in line with new concept, modernized observation

		“Fee-for-service” arrangements have been piloted in few sectors, resulting in a 7% increase in the special account funds. The Marketing Department has initiated regular quality survey assessments of users, and is implementing simplification of the payment system for KgHM services. KgHM budget is now sufficient to cover O&M needs of regular operations.	“Fee-for-service” arrangements have been piloted in few sectors, resulting in a 7% increase in the special account funds. The Marketing Department has initiated regular quality survey assessments of users, and is implementing simplification of the payment system for KgHM services. KgHM budget is now sufficient to cover O&M needs of regular operations.	infrastructure and technologies Kyrgyzhydromet prepared a list of operational guidelines necessary for work in light of the modernized infrastructure; the terms of reference are being developed KgHM regulations and operation guidelines fully functioning “Fee-for-service” arrangements piloted in few sectors KgHM budget sufficient to cover O&M needs of regular operations
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp C: Tajikistan, IRI 3) Increased sustainability and strengthened performance of Tajikhydromet operations (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Existing legal structure, operating procedures and staffing are inadequate to meet TjHM mission needs. Investment and O&M needs far exceed TjHM budgets.	New regulations and operational guidelines developed in line with new concept, modernized observation infrastructure and technologies are fully functioning. “Fee-for-service” arrangement piloted in few sectors, in particular energy, agriculture, housing and transportation. For 10 months of 2017, 9	New regulations and operational guidelines developed in line with new concept, modernized observation infrastructure and technologies are fully functioning. “Fee-for-service” arrangement piloted in few sectors, in particular energy, agriculture, housing and transportation. For 10 months of 2017, 9 contracts were signed	TjHM new regulations and operational guidelines developed in line with new concept, modernized observation infrastructure and technologies TjHM regulations and operational guidelines fully

		contracts were signed for about US$5000. In April 2017 TjHM requested the Environmental Protection Committee to submit the draft budget of Tajikhydromet to the Finance Ministry of taking into account the allocation of additional funds for the O&M of the upgraded observation network. Currently, no additional funds for O & M are needed.	for about US$5000. In April 2017 TjHM requested the Environmental Protection Committee to submit the draft budget of Tajikhydromet to the Finance Ministry of taking into account the allocation of additional funds for the O&M of the upgraded observation network. Currently, no additional funds for O & M are needed.	functional "Fee-for-service" arrangement piloted in a few sectors TjHM budget sufficient to cover O&M needs of regular operations.
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp C: Tajikistan, IRI 5) Increased reliability of climate data (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Information on climate limited and of inadequate quality	Ability to downscale local scales for at least 90% of the country	Ability to downscale local scales for at least 90% of the country	Ability to downscale to local scales for at least 90% of the country
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp B: Kyrgyz Republic, IRI 1) Improved status of hydrometeorological observation networks (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	13% of meteostations gauging main meteo parameters 44% of stream gauges reporting operational data 70% stream gauges measuring discharges	100% of meteostations gauging main meteo parameters. 100% of stream gauges reporting operational data. 95% stream gauges measuring discharges.	100% of meteostations gauging main meteo parameters. 100% of stream gauges reporting operational data. 95% stream gauges measuring discharges.	100% of meteostations gauging main meteo parameters 70% of stream gauges reporting operational data 85% stream

				gauges measuring discharges
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp B: Kyrgyz Republic, IRI 2) Better transmission of data to global telecommunication system (GTS) (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	86.00	85%	85%	100.00
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp C: Tajikistan, IRI 1) Improved status of hydrometeorological observation networks (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	19% of meteostations gauging main meteo parameters 16% of stream gauges reporting operational data 49% stream gauges measuring discharges	100% of meteostations gauging main meteo parameters 50% of stream gauges reporting operational data 60% stream gauges measuring discharges	100% of meteostations gauging main meteo parameters 50% of stream gauges reporting operational data 60% stream gauges measuring discharges	90% of meteostations gauging main meteo parameters 50% of stream gauges reporting operational data 90% stream gauges measuring discharges
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp C: Tajikistan, IRI 2) Better transmission of data to global telecommunication system (GTS) (Percentage, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	70.00	95.00	95.00	100.00
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp A: EC-IFAS, IRI 1): Improved access to national and regional numeric weather prediction products to all CA countries (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	100x250 km transmitted every 12 hours	13 x 13 km every 6 hours The calculation results based on ftp are being transmitted for the regional grid of resolution 13.2x13.2 km using the adapted COSMO technology in Uzhydromet and other NHMS CAs. The system of local calculations for COSMO-CentralAsia-2 with a resolution of 2x2 km is organized. The COSMO-CA-2 technology software was developed for further installation at Uzhydromet. Installation of dedicated high powered computing facilities is currently under way at UzHydromet.	13 x 13 km every 6 hours The calculation results based on ftp are being transmitted for the regional grid of resolution 13.2x13.2 km using the adapted COSMO technology in Uzhydromet and other NHMS CAs. The system of local calculations for COSMO-CentralAsia-2 with a resolution of 2x2 km is organized. The COSMO-CA-2 technology software was developed for further installation at Uzhydromet. Installation of dedicated high powered computing facilities is currently under way at UzHydromet.	13x13 km every 6 hours
Date	10-Dec-2015	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Comp A: EC-IFAS, IRI 2): Established platform for integration of four NHMSs in CA (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Lack of agreed regional approaches on knowledge exchange and emergency procedures	Common methodology to verify hydromet forecasting accuracy developed and used. Installation of the Distance Learning System (DLS) is completed (Almaty, Bishkek, Dushanbe and Tashkent). Guidelines and approaches to regional procedures for emergency prevention agreed by CA NHMS in 2014. In Cholpon-Ata Lake Observatory of Kyrgyzhydromet, a new regional training center on lakes and water reservoirs was established for CA specialists. By December 2016, all activities related to creation of the regional system to access to online information products based on satellite data in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan was completed. Implementation of the cascading method of severe weather forecasting (SWFDP-CA) is ongoing - it is operational and currently being transitioned from Moscow (RosHydromet) to Tashkent (UzHydromet).	Common methodology to verify hydromet forecasting accuracy developed and used. Installation of the Distance Learning System (DLS) is completed (Almaty, Bishkek, Dushanbe and Tashkent). Guidelines and approaches to regional procedures for emergency prevention agreed by CA NHMS in 2014. In Cholpon-Ata Lake Observatory of Kyrgyzhydromet, a new regional training center on lakes and water reservoirs was established for CA specialists. By December 2016, all activities related to creation of the regional system to access to online information products based on satellite data in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan was completed. Implementation of the cascading method of severe weather forecasting (SWFDP-CA) is ongoing - it is operational and currently being transitioned from Moscow (RosHydromet) to Tashkent (UzHydromet).	Regional approach adopted in hydromet forecasting and decision-making mechanism for regional issues formalized among the four NHMSs in CA
Date	10-Dec-2015	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Component B: Kyrgyz Republic, IRI 3) Historical data archiving (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	2,125,000 pages scanned	2,125,000 pages scanned	800,000
Date	31-Aug-2011	01-Dec-2017	01-Dec-2017	30-Jun-2018

▸ (Component C Tajikistan, IRI 4): Historical data archiving (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1,130,500 pages - scanning of data is complete	1,130,500 pages - scanning of data is complete	800,000
Date	31-Aug-2011	28-Oct-2016	28-Oct-2016	30-Jun-2018

Overall Comments

Data on Financial Performance

Disbursements (by loan)

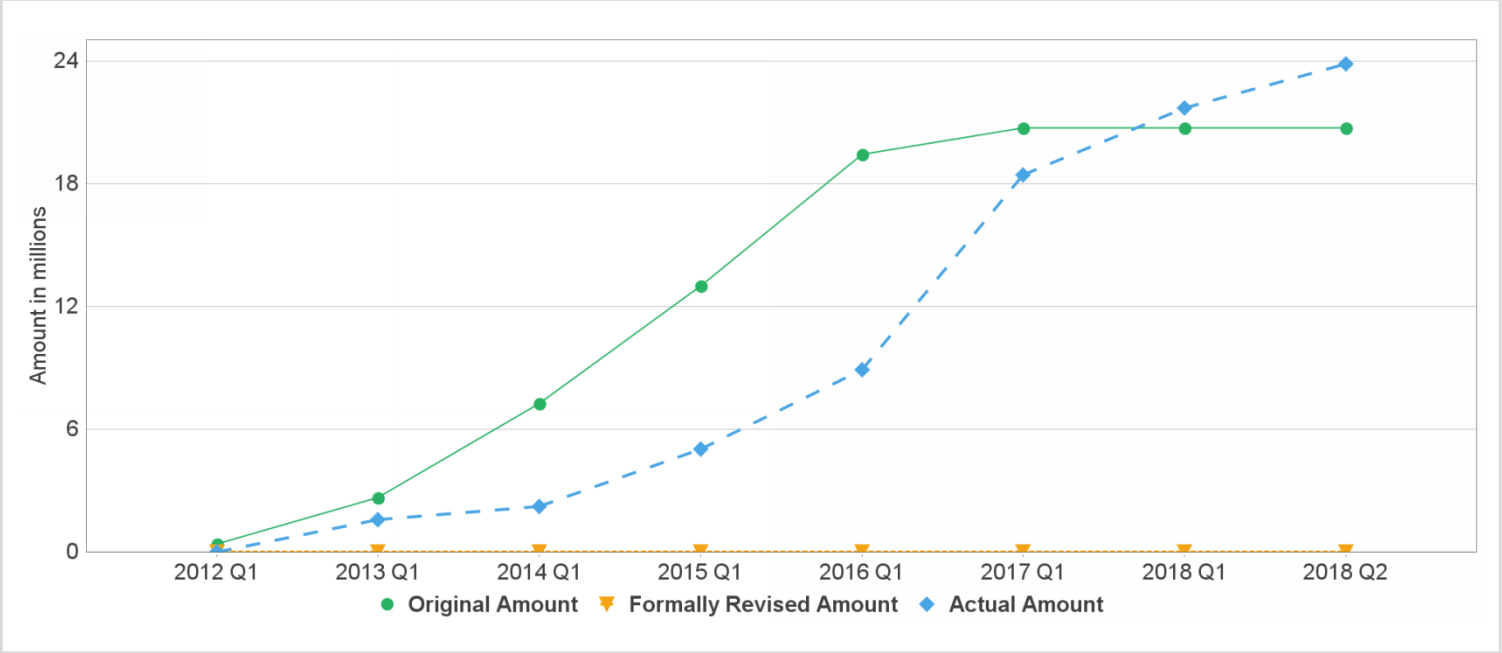
Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	Disbursed
P120788	IDA-49340	Effective	USD	5.10	5.10	0.00	3.93	0.76	77%
P120788	IDA-H6770	Effective	USD	8.70	8.70	0.00	6.89	1.08	79%
P120788	IDA-H6780	Effective	USD	0.90	0.90	0.00	0.64	0.23	71%
P120788	IDA-H6790	Effective	USD	6.00	6.00	0.00	5.55	0.00	92%
P120788	TF-99848	Effective	USD	7.00	7.00	0.00	6.85	0.15	98%

Key Dates (by loan)

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P120788	IDA-49340	Effective	26-May-2011	23-Aug-2011	03-May-2012	31-Aug-2016	30-Jun-2018

P120788	IDA-H6770	Effective	26-May-2011	12-Jul-2011	12-Jan-2012	31-Aug-2016	30-Jun-2018
P120788	IDA-H6780	Effective	26-May-2011	23-Aug-2011	03-May-2012	31-Aug-2016	30-Jun-2018
P120788	IDA-H6790	Effective	26-May-2011	13-Jul-2011	11-Nov-2011	31-Aug-2016	30-Jun-2018
P120788	TF-99848	Effective	13-Jul-2011	13-Jul-2011	11-Nov-2011	31-Aug-2016	30-Jun-2018

Cumulative Disbursements



Restructuring History

Level 2 Approved on 28-Jan-2016

Related Project(s)

P164780-Central Asia Hydrometeorology Modernization Project (CAHMP) Additional Financing