



1. Project Data

Project ID P154255	Project Name PK Balochistan Integ. Water Res. Mangt		
Country Pakistan	Practice Area(Lead) Water		
L/C/TF Number(s) IDA-58850	Closing Date (Original) 31-Oct-2022	Total Project Cost (USD) 77,757,322.82	
Bank Approval Date 28-Jun-2016	Closing Date (Actual) 01-Mar-2025		
	IBRD/IDA (USD)	Grants (USD)	
Original Commitment	200,000,000.00	0.00	
Revised Commitment	80,586,081.73	0.00	
Actual	77,757,322.82	0.00	
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2. Project Objectives and Components

a. Objectives

The Project Development Objectives in the PAD (p. 4) are:” ***(i) to strengthen provincial government capacity for water resources monitoring and management and (ii) improve community-based water management for targeted irrigation schemes in Balochistan***”. The Financing Agreement for the loan (p. 5) has the same objectives. This review has assessed the PDO achievement in terms of the following two objectives:



1. To strengthen provincial government capacity for water resources monitoring and management in Balochistan;
2. To improve community-based water management for targeted irrigation schemes in Balochistan

Five restructurings resulted in a decreased scope of the project, as well as a reduction in targets and indicators. As a result, a split evaluation was conducted in the ICRR.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

No

c. Will a split evaluation be undertaken?

Yes

d. Components

Component A: Institutions, Capacity and Information (US\$20.4 million at appraisal; US\$2.8 million actual). Activities financed under this component included: (i) consultancies to assess revised institutional arrangements for integrated water resource management (IRWM); (ii) installation of hydrometeorological stations, telecommunication equipment, software, and a data center to enable data collection, analysis and dissemination; and (iii) training on hydrometeorological system design, implementation, operation and maintenance; development and use of public water data systems, Geographic Information Systems (GIS), and river and groundwater modeling/analysis, river basin planning and management, including stakeholder participation and economic analysis.

Component B: Water Infrastructure and Management Investments (US\$163.9 million at appraisal; US\$62.6 million actual). This component financed (i) studies and construction/rehabilitation for irrigation headworks, main and secondary canals, village water supply intakes and distribution systems, flood protection works; (ii) watershed protection measures such as social mobilization, soil and water conservation and erosion control interventions, and (iii) farm-level interventions such as the formation of farmer organizations/water user associations, on-farm infrastructure (watercourse lining, small storage ponds/tanks, access tracks), matching grants for farm technologies, and training for farmers.

Component C: Project Management and Technical Assistance (US\$25.4 million at appraisal; US\$13.5 million actual). This component financed project management unit (PMU) staffing and operating costs; M&E activities, design and construction supervision, safeguards and management instruments, studies, and pilots/study tours to inform future investments.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Cost: The estimated total project cost at appraisal was US\$209.7 million. The actual total cost was US\$78.9 million (ICR, p. 28).



Financing: At appraisal, the IDA financing was estimated at US\$200 million, and during implementation, US\$115 million was cancelled from the loan. The amount disbursed at closing was US\$77.8 million of the loan, which was 38.9 percent of the original loan amount and 91.5 percent of the revised loan. (ICR, p. 27). The remaining loan amount was reimbursed to the World Bank.

Borrower Contribution: The Borrower committed US\$9.7 million in counterpart financing and beneficiary contribution at appraisal, and disbursed US\$1.2 million at project close. There was no detailed breakdown of the government's contribution nor the in-kind contribution from beneficiaries.

Dates: The Project was approved on June 28, 2016, and became effective on November 28, 2016. The project closing date at appraisal was set to October 31, 2022, but the actual closing date was extended by 28 months to March 1, 2025, for a total implementation period of eight years and eight months. The Mid-Term Review (MTR) was conducted in January 2019. The project had five restructurings that included the following, none of which involved changing the PDO:

- On March 2019, a level 2 restructuring suspended all disbursements due to slow progress and financial agreement violations.
- On June 2019, a second level 2 restructuring lifted the suspension of the project, revised project components and costs, cancelled US\$90 million from the loan, activities from Component A and B were dropped or scaled back, updated the results framework targets and dropped indicators, revised disbursement estimates and implementation schedule.
- On November 2021, a third level 2 restructuring revised the results framework by adding a new institutional indicator for Component A and dropping and revising other indicators for Component B.
- On April 2022, a fourth level 2 restructuring extended the closing date by 18 months from October 31, 2022, to April 30, 2024.

On April 2024, a fifth level 2 restructuring cancelled US\$25 million from the loan due to local currency fluctuations and savings and extended the closing date by 10 months from April 30, 2024, to March 1, 2025.

3. Relevance of Objectives

Rationale

Pakistan is a lower-middle-income country of about 251 million people in 2024. According to the World Bank's international extreme poverty line of \$3.00 a day at 2021 purchasing power adjusted prices, 16.5 percent of the population lived below this line as of 2018. Balochistan is Pakistan's largest, but also most sparsely populated province with approximately 10 million inhabitants. Despite its deposits of coal, natural gas, oil, iron, gold, and precious stones, it is also Pakistan's least developed province. The annual per capita GDP is less than 60 percent of the national average, the literacy rate is 50 percent (compared to 58 percent nationally) and less than 15 percent of people have access to clean water. (PAD, p. 1) The province borders Afghanistan and Iran, and security difficulties have caused out migration, weakening the human capital available in the area and exacerbating the capacity constraints. This, coupled with a lack of infrastructure, difficulty of getting access to goods and services, limited investment and an absence of coordinated economic policy, have led to economic stagnation in recent decades. (PAD, p. 1). While Balochistan's per capita water availability is well above the national average, inadequate water distribution



infrastructure also makes it one of the least water secure provinces. The province faces episodic rainfall with extended droughts and destructive flash floods. (PAD, p. 2)

At project close, the Country Partnership Strategy (CPS) FY 2015-2019 was extended until the new Country Partnership Framework FY2026-2035 was approved. The project closed in FY2025; therefore, the ICRR evaluates the relevance of the PDO's against the CPS FY 2015-2019. The PDO directly contributed to the CPS's Objective 2.2: Increased Productivity in Farms in Selected Irrigation Schemes and its core indicators of *hectares of irrigated agriculture areas provided with improved water delivery and number of farmers adopted improved technologies for efficient water use*. The PDO was also aligned with Objective 3.3. Increased Resilience to Disasters in Targeted Regions (which includes improved flood management and increased protection); however, the project indicators were not directly aligned with the CPS' Objective 3.3 core indicators.

The PDO aligns with Pakistan's national priorities on water and food security in Balochistan. It is consistent with the National Water Policy (2018), which emphasizes improved water resources management and governance, and more equitable distribution through community-based approaches (ICR, p. 7). The project also aligns with Pakistan Vision 2025, which calls for modernizing irrigation systems and improving water-use efficiency, and with the National Food Security Policy (2018). By improving irrigation efficiency and strengthening water user associations, the project supports higher agricultural productivity and better rural livelihoods—contributing to more sustainable and inclusive development. Although, as formulated, the PDO is highly relevant to Balochistan's development needs, the originally appraised project scope of activities and funding level exceeded the existing institutional capacity, thus leading to significant restructuring events and the scaling down of output and outcomes targets. The relevance of the PDO is rated as High.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To strengthen provincial government capacity for water resources monitoring and management

Rationale

The theory of change (ToC) in the Implementation Completion and Results Report (ICR, p. 3) identified the outcome to be strengthened provincial government capacity for water resources monitoring and management. Through various restructurings, the original activities related to this PDO were scaled back, which are identified below.

The inputs were financing of: (i) consultancies to assess revised institutional arrangements for integrated water resource management (IWRM); (ii) installation of hydrometeorological stations, telecommunication equipment, software, and a data center to enable data collection, analysis and dissemination; and (iii) training



on hydrometeorological system design, implementation, operation and maintenance; development and use of public water data systems, Geographic Information Systems (GIS), and river and groundwater modeling/analysis, river basin planning and management, including stakeholder participation and economic analysis. The project also financed community water points and bulk drinking water supply infrastructure.

The expected outputs were: (i) revised institutional arrangements for IWRM proposed; (ii) installation of hardware and software for water quantity monitoring, data collection, analysis, and distribution; (iii) technical training conducted on the aforementioned subject matter; (iv) installed community water points and bulk drinking water infrastructure.

These outputs were expected to lead to outcomes such as implementation of revised institutional arrangements, improved management of hydrometeorological monitoring systems and information, and improved decision making for IWRM planning as well as increased access to improved drinking water.

These outcomes, in turn, are expected to lead to the PDO of strengthening provincial government capacity for water resources monitoring and management, contributing to higher-level outcomes of increased resilience to climate change and impacts of floods and droughts.

The ToC's activities, outputs, and outcomes as described in the PAD were technical in nature and did not fully address the issues described in the PAD to achieve the PDO. For example, the PAD stated that hydrometeorological data collection, analysis, and dissemination had ceased eight years prior because of a lack of maintenance and operation. (PAD, p. 33) Rebuilding the hydromet infrastructure does not address the issue of why operation and maintenance of the previous system did not occur, putting new investments at risk of disrepair. There was no indicator to monitor whether the government would assign a budget for O&M activities or no explicit critical assumptions in the ICR. Also, drinking water supply became a salient issue during implementation among some communities, and the project dedicated more resources to it, but it did not adequately measure the results through the results framework despite including these benefits in the economic analysis.

OUTPUTS

- 43 active climate, streamflow and groundwater monitoring stations installed, **not achieving** the original target of 150. The project financed the installation of automatic hydro-met stations (7 Automatic Weather Stations, 12 Automatic Rain Gauge Stations, 9 Stream Flow Gauging Stations, and 15 Ground Water Monitoring Wells) in Nari & Porali basins.
- 7,333 person-days of water management/planning training for government staff, **not achieving** the original target of 150,000 person-days. The technical training within the Irrigation department included hydrological modeling, climate-resilient approaches, and data analysis. The capacity that was built within the Irrigation Department was constrained by staff turnover, and low coverage of capacity-building activities in relation to the number of staff. (ICR, p. 8)
- Zero areas protected from four-year average recurrence interval flood Hectares (Ha), **not achieving** the original target of 14,000 Hectares. This indicator was ultimately dropped at the 2021 restructuring.

Outputs that were reported by the ICR but not included in the results framework, and hence had no targets, were:

- The project supported the IWRM Reforms Roadmap Document endorsed by the Cabinet in 2024 and the water bill in 2025, with the latter waiting parliament approval. (ICR, p. 8)



- Established Provincial IWRM Coordination Unit under the Irrigation Department. The ICR stated that efforts to improve inter-provincial department coordination among the Irrigation, Agriculture, and Environment departments through the application of IWRM principles lacked adequate institutional structure to fully realize IWRM benefits. (ICR, p. 8) The ICR interview (February 3, 2026) elaborated that the PMU was comprised of representatives from the Irrigation, Agriculture, and Forest Departments, and hence was de facto operating as an IWRM coordination unit, offering a potential explanation for why the IWRM unit was inactive.
- 58 community drinking water points installed or rehabilitated. These water points were installed with irrigation schemes to help communities separate their drinking water from water for irrigation. (ICR interview, February 3, 2026) The number of people who benefited from these water points was not explicitly documented in the ICR.
- 129,045 people gained access to improved drinking water. The ICR reported that the project invested more heavily in drinking water as this was a concern by local stakeholders. In particular, the project financed a drinking water system in Sibi that included the development of source works, 20 km of conveyance conduit, a water filtration plant, and storage reservoirs. (ICR, p. 5) However, the project did not include any indicators other than the aforementioned community water points to monitor and track these results.

OUTCOMES

- 100 percent of quality-assured hydro-met data from project basins is publicly available in online data systems, achieving the original target of 90 percent. The ICR (p. 8) noted that the Balochistan Water Resources Information System (BWRIS) was established through the project, but that the website is not operational most of the time due to poor infrastructure and lack of continuous maintenance. The definition for this indicator explicitly states that beyond collecting, analyzing, and verifying historical and new daily, monthly, and annual data of precipitation, temperature, evaporation, streamflow and groundwater levels, this information should be made accessible on a public website maintained by the project. The ICR interview (February 3, 2026) confirmed that the local systems and infrastructure are not at a stage where the public at-large can easily access this information. The ICR team stated that connectivity issues for rural farmers and access to smart phones remains a constraint to utilizing this information at the farm-level. However, they said that the information produced was geared more toward local irrigation engineers to influence the allocation of water.

There were shortcomings in achievement of the output indicators. The indicators to monitor PDO 1 captured some elements of institutional capacity but were lacking to fully measure the PDO 1. The outcome indicator was output-oriented and did not capture changes in decision-making around water resource management or improved coordination and collaboration between the Agriculture, Forest, and Irrigation Departments to reflect the implementation of IWRM principles. The efficacy rating is **Modest** due to low achievement and the quality of evidence presented for the achieved results.

Rating
Modest

OBJECTIVE 1 REVISION 1



Revised Objective

To strengthen provincial government capacity for water resources monitoring and management

Revised Rationale

The ToC in the ICR remained the same even with the cancellation of US\$90 million of the loan at the second restructuring (2019). The activities largely remained the same but were reduced in scope as reflected by a reduction in the targets at the output level, such as the number of hydromet stations installed, the number of trainings conducted, and the areas protected from flooding.

OUTPUTS

- 43 active climate, streamflow and groundwater monitoring stations installed, **not achieving** the *revised* target of 60, which is a 60 percent reduction from the originally appraised target of 150 stations.
- 7,333 person-days of water management/planning training for government staff, **exceeding** the *revised* target of 500 person-days, which is a 99 percent reduction from the originally appraised target of 150,000 person-days. The ICR team was not able to fully explain the rationale for a reduction in the target from 150,000 to 500 person-days. The ICR interview (February 3, 2026) indicated that the project focused on training government and the project decided not to track person-hours of farmers trained. The ICR (p. 12) states, “these reforms were also supported by 7,333 person-days of training for staff in hydrological modeling and climate-resilient analysis”, which implies the number of person-days were focused on government officials. The ICR reported that 3,000 farmers were trained to adopt new technologies and farming practices, but there was no indicator to track this.
- Zero areas protected from four-year average recurrence interval flood (Ha), **not achieving** the revised target of 6,000 Ha, which is a 57 percent reduction from the originally appraised target of 14,000 hectares. This indicator was ultimately dropped at the 2021 restructuring.

Outputs that were reported by the ICR but not included in the results framework are the same as reported above.

OUTCOMES

The outcome reported under this revised objective is the same as the original objective.

The revised objective maintains the same indicators but with reduced targets at the output level to reflect the reduced scope of the project. The same weaknesses as identified under the original objective with respect to measuring the ToC remain and were not mitigated during the restructuring. The efficacy rating remains **Modest**.

Revised Rating

Modest

OBJECTIVE 1 REVISION 2

Revised Objective



To strengthen provincial government capacity for water resources monitoring and management

Revised Rationale

The ToC in the ICR remained the same as the original and revised objective. The third restructuring (2021) made adjustments to the results framework by adding and dropping some indicators. The activities largely remained the same, but there was a reduction in the target for the number of hydromet stations installed. The indicator on areas protected from flooding was dropped and was not replaced. The interview with the ICR team (February 3, 2026) indicated that, despite the project keeping some investments in flood control interventions, the ability to accurately monitor and report on this indicator with reliable information in this project context was not possible. The quality and availability of information did not exist, and the indicator was therefore dropped. Dropping the indicator for flood protection and not finding a reasonably suitable replacement introduced a disconnect in project activities, the PDO, and needs on the ground, which were highlighted by the damage to the newly installed infrastructure in 2023. The restructuring also added an indicator to capture the approval of an IWRM reform roadmap by the Cabinet.

The indicators reported below reflect those that have been changed. The indicators, targets, and results that have not changed are reported above and are not repeated in this section.

OUTPUTS

- 43 active climate, streamflow and groundwater monitoring stations installed, **achieving** the *revised* target of 43.
- The IWRM Reforms Roadmap Document was endorsed by the Cabinet in 2024, **achieving** the revised target of the new indicator. (ICR, p. 8)
- 58 community drinking water points installed or rehabilitated, **exceeding** the target of 10 for the new indicator. (ICR, p. 20) The criteria for setting a target of 10 are unclear.

Outputs that were reported by the ICR but not included in the results framework are the same as reported above.

OUTCOMES

The outcome reported under this revised objective is the same as the original objective. The third restructuring tried to address some of the weaknesses in the results framework mentioned above. While the project supported a new roadmap for IWRM reforms in the form of a policy document that was approved near the end of the project in 2024, this occurred almost seven years after project effectiveness. An indicator on the Cabinet approval of the road was added in 2021. The shortcomings related to the other indicators reported in the previous section remain the same. As a result, the rating is upgraded to **Substantial with moderate shortcomings**.

Revised Rating
Substantial

OBJECTIVE 2

Objective



To improve community-based water management for targeted irrigation schemes in Balochistan

Rationale

The ToC in the ICR (p. 3) identified the outcome to be improved community-based water management for targeted irrigation schemes in Balochistan.

The inputs were financing of: (i) consultancies for studies and designs and the rehabilitation/construction of irrigation headworks, main and secondary canals, and flood protection works; (ii) activities for watershed protection as social mobilization, soil and water conservation and erosion control interventions (e.g. afforestation), and (iii) farm-level interventions such as the formation of farmer organizations/water user associations, on-farm infrastructure (watercourse lining, small storage ponds/tanks, access tracks), matching grants for farm technologies, and training for farmers.

The expected outputs were: (i) irrigation and flood control works completed; (ii) watershed protection activities executed; (iii) farmer organizations/water user associations formed as well as farmers trained on new technologies and agricultural practices; and (iv) on-farm infrastructure installed and expanded through the use of matching grants.

These outputs were expected to lead to outcomes such as (i) improved service delivery of irrigation water and reduced risks from flooding; (ii) increased capability of farmer and water user associations to manage water for irrigation; and (iii) improved agricultural productivity.

These outcomes, in turn, are expected to lead to the PDO of improving community-based water management for targeted irrigation schemes in Balochistan, contributing to higher-level outcomes of increased farmer incomes, improved food and nutrition security, and increased resilience to climate change and impacts of floods and droughts.

The ToC's activities, outputs, and outcomes were adequate to make the linkage with the PDO outcome target. There were no critical assumptions listed in the ToC. The indicators in the results framework were generally adequate to measure the ToC, with some shortcomings. There was no indicator on the matching grant scheme to promote on-farm technologies, nor an indicator to track the adoption of new technologies or agricultural practices.

OUTPUTS

- 4,617 Ha of irrigation scheme watershed with good erosion management, **not achieving** the original target of 8,000 Ha. (ICR, p. 20) The ICR reported that watershed improvements were made, including the installation of check dams, terraces & afforestation and the planting of mangroves in Miani Hor to protect 3,500 ha of coastline and enhance fish habitat. (ICR, p. 22)
- 58,150 Ha provided with irrigation and drainage services, **not achieving** the original target of 70,000 Ha. (ICR, p. 9). This was achieved through the construction of six schemes in the Nari and Porali basins.
- 234,044 water users provided with new/improved irrigation & drainage services, **not achieving** the original target of 350,000 people. The sub-indicator and target of 30 percent female was dropped at the first restructuring. The ICR did provide a methodology for how the number of water users was estimated.



- 120 operational water user associations created and/or strengthened (number) **exceeding** the original target of 18. (ICR, p. 20). The WAU's were trained in farmer-led O&M and rotational scheduling of crops.

An output that was reported by the ICR but not included in the results framework, and hence had no target, was:

- Drip irrigation and laser land leveling were promoted on 5,800 hectares, alongside training on high-value, climate-resilient crops such as olives and almonds. The ICR reported that these techniques helped reduce on-farm water use by an estimated 15–20 percent and increased crop yields by 18–25 percent for key commodities.

OUTCOMES

- 82.5 percent of surveyed beneficiaries were satisfied with project implementation, **achieving** the original target of 80 percent. (ICR, p. 20) The ICR reported that 82.5 percent of survey respondents were satisfied with improved water services and households noted enhanced food security and reduced time spent collecting water. (ICR, p. 22)
- 24,320 Ha of irrigated command area with good water management services, **not achieving** the original target of 70,000 Ha. (ICR, p. 19).
- 413,893 people were direct beneficiaries of the project, **not achieving** the original target of 569,000 people. (ICR, p. 19) There is a discrepancy between the PAD's definition of direct beneficiaries and the ICR, which is described below.

The indicators used to measure the ToC and PDO 2 were generally adequate. There was a disconnect in the direct beneficiary indicator definition in the PAD and what was reported in the ICR. The PAD's definition (p. 22) is constrained to individuals or communities who directly derive benefits from the improvements to *irrigation systems*, whereas the ICR calculated and defined direct beneficiaries as those who benefited from irrigation schemes (139,414 people), drinking water supply (129,045 people), flood protection schemes (46,094 people), agricultural schemes (48,536 people), watershed and rangeland interventions (47,501 people), and training (3,303 people). The ICR reported that 413,893 people directly benefited from the project, but it is likely that not all met the definition of the indicator in the PAD. The efficacy rating is **Modest** due to low achievement.

Rating
Modest

OBJECTIVE 2 REVISION 1

Revised Objective

To improve community-based water management for targeted irrigation schemes in Balochistan

Revised Rationale

The second restructuring cancelled a large portion of the loan and, as a result, reduced the scope of the project and related targets. The types of project activities did not change, except for the matching grants that



were cancelled, but the size and location did; therefore, the ToC remains relevant and unchanged. The restructuring made a minor change to the definition of the PDO outcome indicator to better reflect the reality on the ground, but did not substantially change the intent of the indicator.

OUTPUTS

- 4,617 Ha of irrigation scheme watershed with good erosion management, **achieving** the revised target of 4,000 Ha, which is a 50 percent reduction from the original target of 8,000 Ha. (ICR, p. 20)
- 58,150 Ha provided with irrigation and drainage services, **achieving** the revised target of 50,000 Ha, which is a 29 percent reduction from the original target of 70,000 Ha (ICR, p. 9)
- 234,044 water users provided with new/improved irrigation & drainage services, **not achieving** the revised target of 250,000 people, which was reduced by 29 percent from the original target of 350,000 people. (ICR, p. 20)
- 120 operational water user associations created and/or strengthened (number) **exceeding** the revised target of 30, up from the original target of 18. (ICR, p. 20)

The output that was reported by the ICR but not included in the results framework is the same as reported above.

OUTCOMES

- 82.5 percent of surveyed beneficiaries were satisfied with project implementation, **achieving** the original target of 80 percent. (ICR, p. 20) The ICR reported that 82.5 percent of survey respondents were satisfied with improved water services and households noted enhanced food security and reduced time spent collecting water. (ICR, p. 22)
- 24,320 Ha of irrigated area within project schemes with good water management practices, **not achieving** the revised target of 55,000 Ha, reduced from the original target of 70,000 Ha. (ICR, p. 19) This indicator was updated from *irrigated area within project schemes with good water management practices* to *irrigated command area with good water management services* at the November 2021 restructuring.
- 413,893 people were direct beneficiaries of the project, **almost achieving** the original target of 414,000 people. (ICR, p. 19). The number of direct beneficiaries considers a range of interventions such as drinking water supply, flood protection, and agricultural schemes, which did not have beneficiary level indicators in the results framework. The only indicator that captured beneficiary-level progress was the number of water users provided with new/improved irrigation and drainage services. The quality and robustness of the evidence on the total number of beneficiaries is weak.

The reduced targets aligned with the available resources to implement the proposed activities and interventions. As a result of the modified targets, three out of the four output targets were achieved or exceeded, and two of the three outcome targets were achieved or almost achieved. The efficacy rating for PDO 2 is upgraded to **Substantial**.

Revised Rating
Substantial



OBJECTIVE 2 REVISION 2

Revised Objective

To improve community-based water management for targeted irrigation schemes in Balochistan

Revised Rationale

The third restructuring made only one change that did not change the ToC, which was a reframing of the PDO 2 outcome indicator. The indicator was modified from *irrigated area within project schemes with good water management practices* to *irrigable command area with improved water management services*. The restructuring paper indicated that since most of the irrigation schemes built under the project are spate systems, they are heavily dependent on flooding, which is highly variable. The target was also reduced to 26,275 Ha to reflect this reality.

All output indicators and results achieved remain the same as the revised PDO 2 above and are not reported here again. The PDO 2 outcome indicators and achievements that did not change are reported above and repeated here. The outcome indicator and target that were modified are listed below.

OUTCOMES

- 24,320 Ha of irrigable command area with improved water management services, **substantially achieving** the revised target of 26,275 Ha. (ICR, p. 19). This indicator was slightly modified at the third restructuring to better reflect the project's intentions from *irrigated area within project schemes with good water management practices* to *irrigable command area with improved water management services* at the November 2021 restructuring.

The reduced PDO 2 outcome indicator target brings it closer to being achieved, but the target was not fully reached. These changes to this indicator and target do not result in any changes to the efficacy rating; therefore, PDO 2 remains **Substantial**.

Revised Rating

Substantial

OVERALL EFFICACY

Rationale

PDO 1 had indicators that partially measured the ToC at the output and outcome level. Progress was made, but it was limited against the output and outcome targets and was rated as Modest due to low achievement. PDO 2 had a more comprehensive set of indicators that covered the PDOs activities such as improved watersheds, irrigation and drainage services, and WUAs being strengthened along with capturing some beneficiary feedback on project interventions; however, progress against output and outcome targets was limited, resulting in a Modest rating. The overall efficacy rating for PDO 1 and 2 is **Modest**.



Overall Efficacy Rating

Modest

Primary Reason

Low achievement

OVERALL EFFICACY REVISION 1

Overall Efficacy Revision 1 Rationale

While there were reductions in the targets for PDO 1, the project did not achieve two out of the three output indicators. The outcome indicator was reportedly achieved, but the supporting evidence was weak. The PDO 1 remains Modest. The reduction in targets for PDO 2 supported the achievement of three of the four output targets, and two of the three outcome targets were achieved or almost achieved. The result was an upgrade to Substantial. The overall efficacy rating for PDO 1 and 2 is **Substantial with moderate shortcomings**.

Overall Efficacy Revision 1 Rating

Substantial

OVERALL EFFICACY REVISION 2

Overall Efficacy Revision 2 Rationale

PDO 1 was upgraded to weak Substantial, and the revised outcome indicator and target for PDO 2 did not materialize in any changes and remained Substantial. The overall efficacy rating for PDO 1 and 2 remains weak **Substantial**.

Overall Efficacy Revision 2 Rating

Substantial

5. Efficiency

Ex Ante Economic Efficiency: The project conducted a cost-benefit analysis (CBA) to determine the economic feasibility of the project and used standard industry approaches at appraisal with the following benefit streams: (a) increased area under irrigation and cropping intensity; (b) increased crop yields; (c) diversified cropping systems including more high-value crops (orchards and vegetables); (d) increased livestock productivity and production due to increased production of fodder and improved rangeland management; and (e) reduced damages and losses resulting from floods (PAD p. 61-62). The economic internal rate of return (EIRR) of the project at appraisal was 26.3 percent with a Net Present Value (NPV) of PKR\$53,220 (US\$511.7 million) using a discount rate of 6 percent.

Ex Post Economic Efficiency: The economic analysis at project completion differed slightly from the benefit streams considered in the cost-benefit analysis at appraisal. The benefits considered at project close were: (i) increased crop intensity, (ii) higher crop yields, (iii) introduction of high-value vegetable crops, (iv) avoided costs of bottled water, (v) avoided drinking water treatment costs, and (vi) hygienic and health benefits from access to improved water. The benefits considered at appraisal, such as livestock productivity and improved rangeland



management, were not included likely because those activities were reduced to pilot areas, and the flood mitigation works were minor in nature. The added benefits were due to the scaled-up activities related to drinking water supply. The EIRR of the project at close was 29.4 percent with a Net Present Value (NPV) of PKR\$29,614 using a discount rate of 6 percent. The ICR did not provide a US\$ equivalent of the NPV at project close.

Operational and Administrative Efficiency: The project was approved on June 28, 2016, and became effective on November 28, 2016. The project closing date at appraisal was October 31, 2022, but the actual closing date was extended by 28 months until March 1, 2025, for a total implementation period of 8 years and 8 months. The project suffered implementation issues and failures to comply with the legal agreement, resulting in the Bank suspending the project in March 2019 and lifting the suspension in June 2019. The delay between stakeholder consultation that occurred during preparation and project implementation resulted in shifting priorities among community stakeholders and the need to drop certain activities and add others. The restructuring that lifted the suspension significantly reduced the scope of the project activities and accounted for the needs expressed by communities, which helped advance implementation. Factors that slowed progress that were outside the control of the project were security issues, the COVID-19 pandemic, and devastating floods in 2022 that damaged infrastructure works that were under construction. Flood waters remained present until early 2023, slowing implementation progress. These damages required time to evaluate and revise infrastructure designs and contracts to begin reconstruction efforts. Despite the various setbacks that occurred, the project adapted to the challenges and modified the scope accordingly.

Conclusion. The project's ex-post EIRR was slightly higher compared to appraisal. The project largely met its revised targets, accounting for the reduced project costs. The project was able to spend 91.5 percent of the total restructured IDA commitment of US\$85 million. However, the implementation period was over eight years, demonstrating low operational and administrative efficiency. Overall, the efficiency rating is **Modest**.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	26.30	0 <input checked="" type="checkbox"/> Not Applicable
ICR Estimate	✓	29.40	0 <input checked="" type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The project's Relevance was rated as High; the original overall Efficacy was Modest while the Revised Efficacy was Substantial with moderate shortcomings and remained Substantial at that rating for the third revision. The



project's Efficiency was Modest. With the split rating (outlined in the table below), the overall Outcome rating is Moderately Satisfactory.

	Original Objectives	Objectives after June 2019 Revision 1	Objectives after November 2021 Revision 2
Relevance	High		
PDO 1 - strengthen provincial government capacity for water resources monitoring and management	Modest	Modest	Substantial with moderate shortcomings
PDO 2 – improve community-based water management for targeted irrigation schemes	Modest	Substantial	Substantial
Efficacy	Modest	Substantial with moderate shortcomings	Substantial
Efficiency	Modest		
Outcome	Moderately Unsatisfactory	Moderately Satisfactory	Moderately Satisfactory
Numerical value of outcome rating	3	4	4
Amount disbursed (out of US\$145.8 million total disbursed)	US\$5.83	US\$37.83	US\$34.19
Share of disbursements	7%	49%	44%
Weighted value of outcome ratings	0.22	1.94	1.75
Final Outcome rating	3.7 rounded to 4 is Moderately Satisfactory		

a. Outcome Rating
Moderately Satisfactory

7. Risk to Development Outcome

The risks to the development outcomes are primarily linked to:

Financial risk: this risk is related to the ability of the Irrigation Department to have the financial resources, either through government budget allocation and/or collection of user fees, to carry out ongoing operation and maintenance for the newly installed irrigation infrastructure and the new hydromet system. The Asian Development Bank (ADB) and the World Bank are the two largest financing institutions involved in the sector and both have follow-on projects that are continuing to support the Government of Balochistan (ICR interview, February 3, 2026). In the short term, this risk is potentially mitigated through project funds.

Social risk: The project helped strengthen and establish WAUs, but the ICR notes that if continued community engagement through the Irrigation Dept or Agricultural Dept is not sustained, then lack of community participation in the O&M of irrigation schemes would undermine functionality and sustainability of the schemes.

Technical risk: the project installed new hydromet equipment and the government has received support from the ADB for a data center. The ICR noted that the website for making hydromet information publicly



available is frequently not functional, suggesting that there are already challenges with the operation of the system. The following projects between the ADB and the World Bank will likely be critical in helping the government stand up these systems and ensure they are helping inform decision-making. The project invested in drinking water supply and provided a backup generator, pumping stations, and solar panel systems to support the operation of the drinking water treatment plant and storage.

Environmental risk: the infrastructure constructed through the project was already severely damaged during the 2022 floods. If upstream measures to mitigate against severe flooding risks are not addressed, then climatic events similar to the floods of 2022 could have similar impacts in the future.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project was highly relevant to the World Bank's strategy and aligned with the national and regional priorities at the time of appraisal. The design of the project was built upon a predecessor Balochistan Small Scale Irrigation Project (BSSIP) (2008-2014), and informed by similar projects in other countries in the region. Likewise, the project was focused on a high-need region of the country with weak infrastructure and institutional arrangements. The PDO was appropriate to focus on strengthening provincial-level capacity and community-based water management for targeted irrigation schemes. The results framework indicators at appraisal had shortcomings discussed in the monitoring and evaluation section below.

The ICR noted that the project was prepared under a tight timeline in order to utilize the available IDA funds, and as a result the feasibility and readiness assessments were not thoroughly examined. (ICR, p. 16). The shortened preparation timeframe coupled with security challenges, resulted in lack of adequate community consultations that created negative downstream effects during implementation. The project risk ratings were considered high or substantial across all categories, recognizing the weaknesses within the institutional landscape. These high-risk ratings did not match the size, technical sophistication, and ambition of the project.

Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

The World Bank provided close technical support throughout project implementation and conducted, on average, 2 missions per year for a total of 18 formal supervision missions that were documented by Aide Mémoires and ISRs over the course of 8 plus years of implementation. During implementation, there were about six Task Team leaders. The project faced several challenges, both within the control of the project and external factors that had an impact on implementation. The project suffered from prolonged delays in the initial years, resulting in a suspension of disbursements. The Task Team worked with the government and the implementing entity to reduce the scope of the project to align it with the local capacity and



conditions. The Task Team proactively worked with the government and carried out a series of restructurings to address changes and adapt the project and its closing date to external shocks such as the 2022 floods, security challenges, the COVID-19 pandemic, as well as the foreign exchange rate fluctuations that devalued the local currency.

The ICR highlighted that the World Bank Task Team could have provided additional support and training to the government's staff on procurement matters, as the policies, procedures, and regulations were new to the staff. The lack of familiarity with Bank policies resulted in legal challenges and delays in onboarding contractors. (ICR, p. 14). The World Bank's quality of supervision was rated Satisfactory. The Task Team effectively tracked project progress and demonstrated candor and quality in performance reporting.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The PDOs and the results framework indicators were generally adequate but had moderate shortcomings. PDO 1 indicators were largely output-oriented and did not capture changes in the behavior of the implementing agency with respect to monitoring and managing water resources. There could have been additional output indicators beyond the number of hydromet stations installed, and person-days of training provided, and areas protected from four-year average floods. PDO 2 indicators were generally more adequate and covered the ToC, but as the ICR notes, some definitions of the indicators needed to be clarified during implementation. This was true for PDO 1 as well. (ICR, p. 14) The source of baseline information in the PAD was not always clear. The project envisioned M&E consultants in the PMU for monitoring physical progress and outcomes of the project.

b. M&E Implementation

The ICR noted that proper baseline surveys were not carried out for many activities. During implementation, the ISR reports eventually report on indicators once progress was made in the later years of the project. During the first and third restructurings, the results framework's indicators and targets were adjusted. In the first restructuring, the targets were appropriately reduced to match the capacity for implementation, but also missed the opportunity to add indicators to better track progress and results. For example, at the first restructuring project, resources shifted to implement drinking water supply projects that were identified by local authorities. While the project was responsive to these needs, the results framework was not modified to capture these changes at the output or outcome level.

Some indicator definitions, such as irrigated command area with good water management services, were adjusted during implementation to clarify what needed to be measured. Likewise, the indicator of area



protected from four-year average recurrence interval flood was dropped but not replaced with any other indicator despite the project retaining flood protection works. The ICR (p. 14) noted that this created some blind spots in assessing the outcomes of flood protection works.

During implementation, the government hired an M&E consultant to monitor project progress. The ICR notes that the project faced many challenges in implementing the M&E system, which included a deteriorating security situation, the remote geographical location of the project sites, and COVID-19 restrictions. The project was able to carry out an endline survey, attempting to capture outcomes by asking beneficiaries questions about observed changes and satisfaction as a result of the project interventions. The ICR team also attempted to look at satellite imagery prior to the project and post-project interventions for irrigation works to capture changes in crop intensity as documented the ICR annex. The ICR noted that the PDO outcome and intermediate indicators remained vaguely defined throughout project implementation to support robust monitoring and evaluation (ICR, p. 14).

c. M&E Utilization

While there were moderate weaknesses in the M&E systems, the overall monitoring by the PMU of project progress allowed the World Bank to track results and inform decisions to take corrective actions, such as restructurings. The ICR noted that there was a reliance on qualitative data, limited measurement of late-stage investments, and challenges in environmental and social monitoring, which reduced overall M&E efficiency (ICR, p.14).

The overall rating of the Quality of the M&E is considered **Modest**.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

Environmental: the project was classified as a Category A project. The following environmental safeguard policies were triggered: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP4.36), Pest Management (OP 4.09), and Physical Cultural Resources (OP/BP 4.11). The ICR noted that upon project close a third-party evaluation of environmental and social safeguard compliance was conducted. The project developed and implemented 18 Environmental and Social Management Plans. The ICR noted that while a supervision system supported the environmental and social compliance, implementation and stakeholder consultation were weak. The watershed management and afforestation interventions implemented under the project were assessed to have a positive effect on natural habitat, flora and fauna. There were no reports on issues related to pest management and physical cultural resources, but the ICR noted that this could have been a gap in reporting during implementation. The overall safeguards rating for the project in the last ISR was moderately satisfactory.

Social: The project triggered Involuntary Resettlement (OP/BP 4.12), but by project close, there was no full resettlement of communities. The ICR noted that there was voluntary donation for some subprojects. The



project maintained a grievance redress mechanism and was reported to be functional. The ICR noted that there were weaknesses in stakeholder engagement with communities due to security challenges in the area. The limited stakeholder engagement also made it challenging for the project to promote women's participation in the project, which may have also affected women's accessibility to the Grievance Redress Mechanism (GRM). The project had hired a Project Supervision and Implementation Assistance contractor (PSIAC); however, the ICR noted that the contractor lacked personnel to adequately conduct site visits, preventing effective monitoring.

b. Fiduciary Compliance

Financial Management (FM): The FM performance ratings of the project ranged from Satisfactory to Moderately Unsatisfactory. The FM risk rating was High throughout the project's duration and closed at Substantial in the last ISR. The PMU submitted Interim Unaudited Financial Reports (IUFRs) and audited financial statements to the World Bank on time and were deemed acceptable by the World Bank. The audit reports came with unqualified (clean) opinions on the project's annual financial statements.

The project conducted internal audits, and during the last four years of implementation, they were not conducted on time and were submitted late to the World Bank. The ICR reported that the PMU hired a firm to conduct the internal audits for the last four years, and the firm finalized the audit report just before project closure. The World Bank team identified US\$2 million in ineligible expenditures, which the Bank recovered through substitute expenditures.

Procurement: The project was assigned a High risk rating for procurement at appraisal due to the Implementing Agency's low procurement capacity. The ICR noted that the lack of quality procurement staff led to serious lapses in compliance, and the involvement of the government's National Accountability Bureau. The project also suffered from foreign exchange rate fluctuation, complicating procurement planning, which also made it difficult to control contract costs. (ICR, p. 13). The ICR noted insufficient training of PMU staff on World Bank procurement policies leading to legal challenges and onboarding of contractors.

The ICR reported notable weaknesses in two key areas: (1) inadequate cross-checking of specific experience requirements during contractor evaluation, and (2) deficiencies in drafting performance security requirements. The ICR reported that these issues subsequently led to significant procurement and contract management challenges. (ICR, p. 37)

c. Unintended impacts (Positive or Negative)

None

d. Other

None



11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	Substantial	

12. Lessons

Working in fragile security contexts can pose risks to project implementation and require careful planning to mitigate risks. This project experienced serious security concerns. During implementation, the number of reported killings in the province increased between 2023 and 2024. While there were no project staff, consultants, or contractors directly killed, the lack of security had a negative impact on implementation. Experience from the project highlighted that special attention is required for personnel (staff, consultants, and contractors) working on projects in such contexts to ensure there are adequate resources provided for their security, but also selecting project sites that are feasible to access. While security risks can be fluid and not constrained to specific geographic areas, this project highlighted that the design phase could have been more discerning and realistic about the selection of geographic areas. (ICR, p. 17)

Stakeholder consultations can play a critical role in identifying appropriate interventions, introducing new concepts and ideas, and enhancing the sustainability of interventions. This project highlighted that when stakeholder consultations are short-circuited, the likelihood of community resistance will increase, or the sustainability of the interventions is at risk. This was exemplified in three different geographic areas of the project, where in Mushkaf, pilots were used with local communities to introduce new ideas and were successfully supported through repeated engagement. In comparison, project interventions in places such as Yetabad, that lacked stakeholder engagement, faced delays or the interventions were dropped because of unresolved community concerns. Lastly, in the town of Sibi where the drinking water supply system was rehabilitated, the local operator (Public Health Engineering Department) was not adequately involved during the design and construction phases and expressed concerns during the handover process of the infrastructure. Early investment and frequency during implementation in stakeholder consultations are important to understand the nuances of local tribal, cultural and social dynamics and how they influence design and implementation decisions. This point is particularly salient for projects that may face security issues due to ongoing local conflict. (ICR, p. 17)

Program continuity can be important, particularly in low-capacity environments, to ensure knowledge transfer. New projects often start from scratch, losing the lessons, institutional memory, and expertise of staff from previous projects. Having a programmatic approach or follow-on projects can help ensure that local capacity is retained after one project cycle. This proved to be very



valuable during the preparation of the two World Bank-financed projects, the Balochistan Water Security and Productivity Improvement Project (P179227) and the Integrated Flood Resilience and Adaptation Project (P180323), where the PMU for this project and the capacity created by the project played crucial roles. (ICR, p. 17)

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provides a comprehensive and detailed overview of the project. The narrative largely supports the ratings and is based on available evidence. The ICR is candid, clearly aligned with the project development objective, concise, and generally follows the guidelines. The sources of information were adequately documented, and the shortcomings were candidly reported on. The annexes in the ICR were clear with some photographs. The quality of evidence and analysis was adequate, and the lessons are relatively clear. The rating is Substantial.

a. Quality of ICR Rating

Substantial