
President's report

Proposed loan

Kingdom of Cambodia

**Climate Adaptive Irrigation and Sustainable
Agriculture for Resilience (CAISAR)**

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Action: The Executive Board is invited to approve the recommendation contained in paragraph 45.

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Map of the project area



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.
Map compiled by IFAD | 15-01-2025

Financing summary

Initiating institution:	IFAD
Borrower/recipient:	Kingdom of Cambodia
Executing agency:	Ministry of Water Resources and Meteorology, and National Committee for Sub-National Democratic Development Secretariat
Total project cost:	US\$240 million
Amount of IFAD loan 1 under the performance-based allocation system (PBAS):	SDR 12.4 million
Terms of IFAD loan 1:	Blend terms, which shall be subject to interest on the principal amount outstanding and a service charge as determined by the Fund at the date of approval of the loan by the Fund's Executive Board. The interest rate and service charge determined will be fixed for the life cycle of the loan and shall have a maturity period of 25 years, including a grace period of 5 years
Amount of IFAD loan 2 under the Borrowed Resource Access Mechanism (BRAM):	US\$8 million
Terms of IFAD loan 2:	Ordinary terms, which shall be subject to interest on the principal amount outstanding of the loan, at a rate equal to the IFAD reference interest rate including a variable spread, payable semi-annually in the loan service payment currency, and have a maturity period of 20 years, including a grace period of 5 years
Cofinanciers:	Asian Infrastructure Investment Bank (AIIB) and Green Climate Fund (GCF)
Amount of cofinancing (AIIB):	US\$100 million
Terms of cofinancing (AIIB):	N/A
Amount of cofinancing (GCF):	US\$40 million grant and US\$40 million loan
Terms of cofinancing (GCF):	The loan will have a maturity period of 20 years and grace period of 5 years, with an annual interest rate of 0.75 per cent, service fee of 0.5 per cent and commitment fee of 0.75 per cent
Contribution of borrower/recipient:	US\$15 million
Financing gap:	US\$20 million
Amount of IFAD climate finance:	US\$25 million (of which US\$0.98 million is a climate top-up)
Cooperating institution:	IFAD

I. Context

A. National context and rationale for IFAD involvement

National context

1. Cambodia has made significant progress in poverty reduction, but recent challenges, including the COVID-19 pandemic and the war in Ukraine, have reversed some of these gains. The poverty rate has increased from 10 to 17.8 per cent, with rural populations remaining especially vulnerable. Although agriculture accounted for 22 per cent of GDP and employed 35 per cent of the population in 2020, low land and labour productivity and limited irrigation (only 7 to 8 per cent of Cambodia's cropland is irrigated) hinder further growth. About 75 per cent of Cambodia's 1.7 million farming households are smallholders, with many living just above the poverty line and relying on supplementary wage labour.
2. Farming in Cambodia remains largely subsistence-based and rainfed, with low productivity and limited irrigation coverage, as only 7 to 8 per cent of the total agricultural land is fully irrigated, and 85 per cent of rice cropping areas are vulnerable to changing rainfall patterns. Farmers lack knowledge and tools to adapt to climate change, including the awareness of climate-resilient practices and improved technologies. Additionally, barriers such as limited access to credit and market intelligence, and a growing labour shortage due to rural-to-urban migration, further hinder smallholder productivity. Climate change disproportionately affects women and vulnerable groups, who face greater challenges due to limited access to financial resources, land, education and adaptive agricultural technologies. Despite their higher participation in agriculture, women have less influence in decision-making, which leads to their specific needs being often overlooked. The Agricultural Development Policy 2021–2030 aims to address these challenges by promoting a more commercial agricultural sector, focusing on enhancing productivity, market access and climate resilience. Effective implementation of this policy is key to sustaining agricultural growth and reducing rural poverty in the long term.

Special aspects relating to IFAD's corporate mainstreaming priorities

3. In line with IFAD's mainstreaming commitments, the project has been validated as:
 - Including climate finance
 - Including adaptive capacity

Rationale for IFAD involvement

4. IFAD is uniquely positioned to support the Government of Cambodia in implementing the Climate Adaptive Irrigation and Sustainable Agriculture for Resilience (CAISAR) project, leveraging its strong partnerships with government agencies, civil society and the private sector. By focusing on pro-poor value chains, IFAD ensures that rural communities are not left behind as the economy transforms. IFAD will apply its specialized expertise to help farmers overcome key barriers, enabling them to enhance productivity and increase their share of market value in both domestic and export markets. This approach will build on the successes of previous and ongoing initiatives, such as the Agriculture Services Programme for an Inclusive Rural Economy and Agricultural Trade and the Accelerating Inclusive Markets for Smallholders Project, which have worked to formalize informal business clusters, improve access to sustainable technologies and foster partnerships with the private sector.
5. Through CAISAR, IFAD will continue its commitment to inclusive financial services by utilizing public sector banks for investment financing, thus leveraging its global expertise. In collaboration with the Asian Infrastructure Investment Bank (AIIB) and the Green Climate Fund (GCF), IFAD will continue its programmatic approach, strengthening synergies between ongoing projects. This comprehensive strategy

will maximize the impact of the CAISAR project, ensuring long-term sustainability and growth for Cambodia's rural economy.

B. Lessons learned

6. Lessons learned from IFAD's country strategic opportunities programme for Cambodia and elsewhere have been documented in the project design report and are summarized as follows:
 - The need for differentiated strategies to meet the needs of two key target groups: smallholders advancing in agricultural commercialization and poor households seeking out coping strategies;
 - The need for adequate time and resources for capacity-building;
 - The need for a holistic approach to smallholder capacity-building, which includes: (i) social capital and inclusive governance; (ii) production and productivity; (iii) access to sustainable markets; and (iv) viable business models that include cash flows;
 - The importance of devolved, pluralistic extension services promoting good agricultural practice through a network of community change agents;
 - The need for increasing the importance of and potential for digital services for smallholder farmers and value chains;
 - The need to develop partnerships with financial institutions to increase access to finance on suitable terms for smallholders and small and medium-sized agriculture enterprises;
 - The need for targeting value chains through a cluster approach to group poorer areas with more developed ones, while ensuring pro-poor inclusion throughout;
 - The need to recognize that structural transformation of the economy will result in many people in IFAD's target group transitioning from farming to wage-based livelihoods, which requires project design to give adequate importance to creating decent rural employment.

II. Project description

A. Objectives, geographical area of intervention and target groups

7. The CAISAR project will benefit more than 1.7 million people (roughly 11 per cent of Cambodia's population) in four provinces across Cambodia: Kampong Speu, Kampong Chhnang, Kandal and Pursat. The target areas have been identified based on: (i) greater prevalence of poverty and food insecurity; (ii) the need for upgrading irrigation infrastructure for floods and droughts, especially floods; (iii) higher vulnerability to climate change; and (iv) low indicators of development. The specific characteristics of each province have been mapped against the criteria for selection.
8. A total of 375,171 households – corresponding to about 1,575,716 people – will benefit from the project, mainly belonging to three types of the target groups: very poor and poor households as well as households above the poverty line. Beneficiaries will include women, youth and smallholder farmers. The project will emphasize conserving the biodiversity of the target districts and the project activities will have no negative impact.

B. Components, outcomes and activities

9. The CAISAR project will have the following components: (i) farm-level climate adaptation and resilience; (ii) upgrading and climate-proofing water infrastructure

for increased resilience; and (iii) strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways.

10. **Component 1: Farm-level climate adaptation and resilience** will be handled by the National Committee for Sub-National Democratic Development Secretariat (NCDDS) and includes:
 - Output 1.1: Increased farmer capacity in climate-resilient agriculture;
 - Output 1.2: Climate adaptive value chains developed by public-private-producer partnerships (4Ps) and increased access to finance;
 - Output 1.3: Increased access to climate information and advisory services for climate-responsive water use and crop planning;
 - Output 1.4: Increased resilience of farm road infrastructure to climate change.
11. **Component 2: Upgrading and climate-proofing water infrastructure for increased resilience** will be handled by the Ministry of Water Resources and Meteorology (MOWRAM) and includes:
 - Output 2.1: Modernized irrigation schemes and ponds;
 - Output 2.2: Flood-proofing and drainage improvement;
 - Output 2.3: Farmer water user communities (FWUCs) established and trained;
 - Output 2.4: Water information system established and operational in three subprojects.
12. **Component 3: Strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways** will include:
 - Output 3.1: Strengthened MOWRAM;
 - Output 3.2: NCDDS strengthened at national and provincial level.
13. The project area is expected to comprise 32,000 hectares (ha). The schemes or subprojects will include Ou Ta Paong and Lum Hach, and four smaller subprojects in the Krang Ponley valley. The cultivation and utilization of these areas varies by season and planting cycle. While the entire project area is expected to plant wet season rice crops, the area in which a second irrigated dry season rice crop can be established is 22,051 ha. In the remaining 10,000 ha in the dry season, vegetable production, mainly homestead gardening, poultry production and aquaculture can be established. In several of the four Krang Ponley subprojects, commercial vegetables are planned to be planted due to the proximity to Phnom Penh, and other conditions. Components 1 and 2 are expected to work in close synergy to maximize the benefits from the investments.
14. Details of the six irrigation subprojects are outlined in table 1.

Table 1
Details of the six irrigation subprojects

Irrigation scheme	Component 2									
	Component 1 (Same as output 2.1 + 2.2)		Output 2.1		Output 2.2 (Additional area of output 2.1)		Output 2.3 (Additional area of output 2.1 + C2.2) (Not included in the total area)		Total	
	Area (ha)	Ratio (%)	Area (ha)	Ratio (%)	Area (ha)	Ratio (%)	Area (ha)	Ratio (%)	Area (ha)	Ratio (%)
Ou Ta Paong	17 079	53	14 874	67	2 205	22	80 000	100	17 079	53
Lum Hach	6 350	20	3 900	18	2 450	24	-	-	6 350	20
Krapeu Trom	1 140	4	690	3	450	5	-	-	1 140	4
Yutasas	2 693	8	593	2	2 100	21	-	-	2 693	8
Stoeung Krang Bat	1 394	4	994	5	400	4	-	-	1 394	4
Brambei Mom	3 400	11	1 000	5	2 400	24	-	-	3 400	11
Total	32 056	100	22 051	100	10 005	100	80 000	100	32 056	100

Note: Output 2.2 – River training: length of river training work = 400 m (width of impact) converted in ha.

Output 2.2 – Polder: length of polder (m) = 1,000 m (width of impact) converted in ha.

Output 2.3 – Masterplan area potential impact = 80,000 ha in Ou Ta Paong scheme area (not included in total area).

C. Theory of change

15. CAISAR's theory of change is based on experiences that have shown that addressing the complex impacts of climate change on rainfed and irrigated agriculture requires action at three levels – at the farm level, at the irrigation scheme level and at the national level – in order to create a strong institutional base and an enabling environment. The project's theory of change has therefore based its investments on an understanding of the pathways that can help reduce greenhouse gas emissions and help smallholder farmers adapt to climate change by applying climate-resilient agricultural technologies. The CAISAR project will adopt a three-pronged strategy to bring about a paradigm shift in the farming systems and the water management governance in Cambodia. The integrated actions combining the various elements of the strategy can have a transformative impact on reducing vulnerability of water and agriculture systems to climate change impacts, while also reducing greenhouse gas emissions and enhancing the livelihoods of rural populations, who primarily depend on agriculture.

D. Alignment, ownership and partnerships

16. CAISAR will contribute to the achievement of Sustainable Development Goals (SDGs) 1 (no poverty), 2 (zero hunger), 5 (gender equality), 6 (clean water and sanitation), 8 (decent work and economic growth), 13 (climate action) and 15 (life on land). The project is aligned with the strategic objectives of Cambodia's Country Strategic Opportunities Programme 2022–2027, which closely reflect the global strategic objectives set under the Twelfth Replenishment of IFAD's Resources (IFAD12).

E. Costs, benefits and financing

17. The financing gap of US\$20 million may be sourced through subsequent performance-based allocation system (PBAS) cycles and/or through the Borrowed Resource Access Mechanism (BRAM) (under financing terms to be determined and subject to internal procedures and subsequent Executive Board approval) or by cofinancing identified during implementation.
18. Project outputs 1.1, 2.2 and 3.2 are counted as climate finance. As per the multilateral development banks' methodologies for tracking climate change adaptation and mitigation finance, the total amount of IFAD climate finance for this project is estimated as US\$25 million or 100 per cent of the total IFAD project cost.

Project costs

19. The total project cost amounts to US\$240 million over a seven-year implementation period.

Table 2

Project costs by component and financier

(Thousands of United States dollars)

<i>Component</i>	<i>IFAD loan PBAS</i>		<i>IFAD loan BRAM</i>		<i>GCF grant</i>		<i>GCF loan</i>		<i>AiIB credit</i>		<i>Borrower/ recipient</i>		<i>Financing gap</i>		<i>Total</i>	
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>
1. Farm-level climate adaptation and resilience	12 929	76	-	-	26 323	66	-	-	-	-	1 193	8	-	-	40 445	17
2. Upgrading and climate-proofing water infrastructure for increased resilience	691	4	8 000	100	3 300	8	39 000	98	95 958	96	11 125	74	9 634	48	167 708	70
3. Strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways	-	-	-	-	8 670	22	-	-	-	-	917	6	-	-	9 587	4
4. Project monitoring and evaluation	3 379	20	-	-	1 707	4	1 000	2	4 042	4	1 765	12	7 928	40	19 822	8
5. Contingencies	-	-	-	-	-	-	-	-	-	-	-	-	2 438	12	2 438	1
Total project costs	17 000	100	8 000	100	40 000	100	40 000	100	100 000	100	15 000	100	20 000	100	240 000	100

Table 3

Project costs by expenditure category and financier

(Thousands of United States dollars)

<i>Expenditure category</i>	<i>IFAD loan PBAS</i>		<i>IFAD loan BRAM</i>		<i>GCF grant</i>		<i>GCF loan</i>		<i>AiIB credit</i>		<i>Borrower/ recipient</i>		<i>Financing gap</i>		<i>Total</i>	
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>In kind</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>
Investment costs																
1. Works	3 159	19	8 000	100	12 000	30	34 450	86	86 606	87	5 869	39	11 722	59	161 807	67
2. Training, workshops and conferences	8 400	49	-	-	2 769	7	-	-	567	1	986	7	-	-	12 722	5
3. Professional and contractual services	3 124	18	-	-	9 995	25	4 550	11	10 992	11	994	7	6 956	35	36 611	15
Total investment costs	14 684	86	8 000	100	24 763	62	39 000	98	98 165	98	7 850	52	18 677	93	211 139	88
Recurrent costs																
1. Salaries and allowances	1 816	11	-	-	9 508	24	-	-	1 107	1	6 961	46	1 323	7	20 714	9
2. Materials and equipment	500	3	-	-	4 021	10	-	-	728	1	100	1	-	-	5 349	2
3. Travel	-	-	-	-	1 708	4	1 000	2	0	-	90	1	-	-	2 798	1
Total recurrent costs	2 316	14	-	-	15 237	38	1 000	2	1 835	2	7 150	48	1 323	7	28 861	12
Total project costs	17 000	100	8 000	100	40 000	100	40 000	100	100 000	100	15 000	100	20 000	100	240 000	100

Table 4

Project costs by component and project year (PY)

(Thousands of United States dollars)

Component	PY1		PY2		PY3		PY4		PY5		PY6		PY7		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	
1. Farm-level climate adaptation and resilience	1 339	3	4 852	12	5 747	14	6 439	16	8 373	21	7 711	19	5 984	15	40 445
2. Upgrading and climate-proofing water infrastructure for increased resilience	3 578	2	5 425	3	21 125	13	51 923	31	59 068	35	25 048	15	1 541	1	167 708
3. Strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways	1 345	14	1 470	15	1 333	14	1 313	14	1 478	15	1 313	14	1 333	14	9 587
4. Project monitoring and evaluation	2 634	13	2 894	15	2 894	15	3 125	16	2 804	14	2 483	13	2 989	15	19 822
5. Contingencies	348	14	348	14	348	14	348	14	348	14	348	14	348	14	2 438
Total project costs	9 245	3.9	14 989	6	31 447	13	63 149	26	72 071	30	36 904	15	12 196	5	240 000

Financing and cofinancing strategy and plan

20. IFAD will finance US\$25 million, which represents 10.4 per cent of the total project costs. This includes US\$17 million from the PBAS allocation to Cambodia for IFAD13 and US\$8 million from the BRAM. AIIB's cofinancing amounts to US\$100 million, or 41.7 per cent, while the GCF will provide US\$80 million, accounting for 33.3 per cent of the costs. This GCF funding consists of a US\$40 million loan and an additional grant of US\$40 million. The counterpart funding from the Government is US\$15 million, or 6.25 per cent, and there is an estimated financing gap of US\$20 million, or 8.3 per cent. The financial structure of the project is based on the importance of investing in modernizing and climate-proofing the irrigation and drainage infrastructure in the selected project areas. About 70 per cent of the total project costs of US\$240 million will be allocated to irrigation infrastructure. To the soft activities included in component 1 (training farmers through the farmer field school approach, and organizing 4Ps and multi-stakeholder forums, and early warning and climate information services), 16.8 per cent of total project costs will be allocated, while 4.5 per cent will be allocated to institutional strengthening at national level. Project management will receive an allocation of 5 per cent and the GCF contribution to project management costs will be in the same proportion as its total financing for the project, which is 33 per cent.

Table 5

Project budget by component and funding source

(Millions of United States dollars)

Component	Funding source							Financing gap	%
	Total cost	GCF (grant)	GCF (loan)	IFAD (loan)	AIIB (credit)	Government of Cambodia (in kind)			
1. Farm-level climate adaptation and resilience	40.4	26.3	-	12.9	-	1.2	-	16.9	
2. Upgrading and climate-proofing water infrastructure for increased resilience	167.7	3.3	39.0	8.7	96.0	11.1	9.6	69.9	
3. Strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways	9.6	8.7	-	-	-	0.9	-	4.0	
4. Project management, and monitoring and evaluation	19.8	1.7	1.0	3.4	4.0	1.8	7.9	8.3	
5. Contingencies	2.4	-	-	-	-	-	2.4	1	
Total	240.0	40.0	40.0	25.0	100.0	15.0	20.0	100	
Proportionate share (%)		16.7	16.7	10.4	41.7	6.3	8.3		

Disbursement

21. The Ministry of Economy and Finance (MEF) will authorize the opening of four designated accounts in United States dollars at the National Bank of Cambodia for the receipt of the financing from IFAD's PBAS, IFAD's BRAM and the GCF loan and grant resources. Two United States dollar project accounts (one for the MOWRAM and one for the NCDDES) will be opened at commercial banks for the payment of project activities. One government counterpart fund account is to be maintained by the MEF through which the proceeds of the financing shall be further transferred to two sub-accounts in commercial banks to receive counterpart funds from the counterpart fund account. IFAD funds will be disbursed through the revolving fund mechanism, under which the project can withdraw/justify the advance based on the interim financial report (IFR) following the procedures and conditions outlined in the financial management and financial control arrangements letter (FMFCL). IFAD will send the FMFCL to MOWRAM and MEF with guidance on disbursement procedures; MEF will send a letter through the IFAD Client Portal providing the delegation and authorization of the persons who can request and approve the submission of the IFR and withdrawal application in the portal.

Summary of benefits and economic analysis

22. The economic analysis of the project, considering all costs, indicates promising economic returns over a 30-year evaluation period and a social discount rate of 9.47 per cent. The economic internal rate of return is estimated at 16.3 per cent, and the net present value is projected at US\$143.6 million, with a benefit-cost ratio of 1.26 and a payback period of nearly 12 years. Sensitivity and scenario analyses underscore the robustness of these evaluations, suggesting that the project would remain profitable even within a 20-year evaluation period. The sensitivity analysis shows that the project could become unprofitable if projected benefits decrease by more than 20.7 per cent, or if costs increase by more than 26.1 per cent due to potential shocks during implementation, which is unlikely, given the local economic context and macroeconomic trends observed.

Exit strategy and sustainability

23. The project will focus on strengthening farm-level capacity to help farmers adopt improved production techniques, reduce emissions from rice cultivation, and enhance practices like alternate wetting and drying, soil conservation, water management and crop diversification. Farmers will receive refresher training sessions, and be connected with both public extension services and the private sector for adaptive inputs and technologies. NGOs, common back offices, social enterprises and private companies will support the smallholder farmers, providing services like solar pumps, mechanization and climate adaptive rice varieties. By linking smallholders with the private sector for extension advice and inputs, the project aims to create a sustainable exit strategy, while the NCDDES will ensure that public extension services are continued, and that technology is adopted.
24. The project will capitalize on the existing Law on Water Resources Management of the Kingdom of Cambodia under which farmers have to contribute to the operations and maintenance (O&M) costs of irrigation systems. This requirement is well accepted, although at present O&M contributions are far below the required levels (usually US\$8 to US\$10/ha/crop). Experience from some pumped irrigation schemes developed under the Australian Department of Foreign Affairs and Trade, the Cambodia Agricultural Value Chain project, shows that farmers are paying up to US\$80/ha/crop for the O&M for routine maintenance in the case of a pumping scheme. The CAISAR project will pilot an irrigation fee that will be levied by the FWUCs who have the authority to collect the payment.
25. The project will focus on developing and training FWUCs to ensure efficient management of irrigation schemes. Local communities will be involved in scheme cleaning, maintenance and management, with FWUCs playing a key role. The

CAISAR project team has surveyed FWUCs in the project areas and will collaborate with MOWRAM and the Provincial Departments of Water Resources and Meteorology to establish and train FWUCs. Investment will be directed towards building their capacity for effective, sustainable scheme management, enhancing the long-term financial and operational sustainability of the irrigation systems.

III. Risk management

A. Risks and mitigation measures

26. CAISAR is considered a project with substantial risk. The project faces several risks related to technical capacity, policy frameworks, coordination, procurement, social and environmental impacts, and private sector engagement. Weak institutional capacity in water resources management, insufficient policies for climate change integration and poor coordination among ministries could slow project implementation. To mitigate this, the project will provide targeted training for key stakeholders, assist in revising climate-sensitive policies, establish a robust coordination mechanism and set up a dedicated procurement team. Social and environmental risks will be addressed through the environmental and social impact assessment (ESIA) and the environmental, social and climate management plans (ESCMPs), as well as other specific management plans developed for the project, while the private sector's limited engagement with smallholder farmers will be tackled by enhancing demand for climate adaptive technologies and creating platforms for public-private partnerships. These measures aim to ensure the project's long-term success and sustainability. Financial management (FM) risks include: (i) a potential lack of capacity among FM staff at implementing agencies and (ii) the absence of prior experience with IFAD-funded projects within MOWRAM. To mitigate these FM risks, transparent recruitment of qualified FM consultants will be ensured; hands-on training will be provided for FM staff at the implementing agencies; and a detailed project implementation manual will be developed, outlining clear roles and responsibilities.

Table 6

Overall risk summary

<i>Risk areas</i>	<i>Inherent risk rating</i>	<i>Residual risk rating</i>
Country context	Moderate	Moderate
Sector strategies and policies	Moderate	Moderate
Environment and climate context	High	High
Project scope	Moderate	Moderate
Institutional capacity for implementation and sustainability	Moderate	Moderate
Financial management	Substantial	Substantial
Project procurement	Moderate	Moderate
Environment, social and climate impact	High	High
Stakeholders	Moderate	Moderate
Overall	Substantial	Substantial

B. Environment and social category

27. The proposed environmental and social risk category is high. An ESIA and ESCMPs have been prepared, as well as other management plans, a stakeholder engagement plan, a land acquisition and resettlement planning framework, a gender action and social inclusion plan, a cultural heritage management plan, an Indigenous Peoples' plan and a Free, Prior and Informed Consent implementation plan.

C. Climate risk classification

28. The climate risk category is Substantial. An in-depth climate risk analysis has been prepared. The screening checklist provided in the ESIA and ESCMPs and the recommendations of the climate risk analysis will guide the project to implement

adequate adaptation and mitigation measures while working in climate-vulnerable areas.

D. Debt sustainability

29. The Debt Sustainability Analysis of November 2021 of the International Monetary Fund and World Bank indicates that Cambodia remains at low risk of external and overall debt distress. The current debt-carrying capacity is consistent with a medium classification. Under the baseline scenario, external debt remains well below thresholds. In line with a wider fiscal deficit over the medium term, external debt is projected to gradually rise from 36 per cent of GDP in 2021 to 38.1 per cent of GDP in 2028, before stabilizing at around 37 per cent of GDP in early 2030.

IV. Implementation

A. Organizational framework

Project management and coordination

30. The executing entity for the project will be the Ministry of Water Resources and Meteorology, which is responsible for sustainable water resource management and irrigation in Cambodia. MOWRAM will establish a project management unit (PMU) for the coordination of all components and consolidation of the project planning and reporting. In addition, the National Committee for Sub-National Democratic Development Secretariat will be responsible for the implementation of component 1, which is designed to improve farm-level climate adaptation, resilience and water use efficiency. The NCDDS is a Direct Access Accredited Entity to the GCF and will have a project implementation unit (PIU) for implementing component 1 activities.

Financial management, procurement and governance

31. The PMU and PIU established by MOWRAM and the NCDDS respectively will be responsible for the FM arrangements. The PMU will be responsible for consolidating project IFRs and annual financial statements, and for arranging annual audit reports and submitting these to IFAD. Both implementing agencies have qualified government staff with relevant experience and expertise in donor-funded operations for the timely preparation and submission of project budgets, and who can ensure adequate internal controls and fund flow arrangements under the additional financing. However, the PMU and PIU will need to hire qualified consultants to handle daily FM tasks, including accounting record-keeping and financial reporting. Both implementing agencies will have accounting software to keep reliable accounting records and submit acceptable IFRs to IFAD. The project's internal control framework includes the standard operating procedures developed by the Government of Cambodia to manage projects funded by international financial institutions. Furthermore, the CAISAR project implementation manual will be revised and approved, as needed, to include any additional policies and procedures that are required time to time during the project's implementation.

Procurement

32. The PMU will be directly responsible for project procurement activities. It will have a procurement team that includes a procurement chief, a procurement officer, a procurement specialist and a procurement assistant. Procurement with IFAD funds will follow the standard operating procedures on procurement for all externally financed projects in Cambodia insofar as they are consistent with the IFAD Project Procurement Guidelines. The PMU will prepare annual procurement plans in alignment with the annual workplans and budgets, and submit them for IFAD's no objection before proceeding with procurement activities. IFAD's Online Project Procurement End-to-End System (OPEN) will be used for preparation and monitoring of the implementation of project procurement plans. Requests for IFAD's prior review and no objection will be routed through OPEN.

33. Procurement risk assessment of the project conducted as stipulated in the IFAD Project Procurement Manual shows that the overall inherent procurement risk is moderate.

Target group engagement and feedback and grievance redress

34. Target group engagement and feedback processes will be centred on the supported smallholder farmers.
35. The project will establish an accessible and transparent process for those affected by the project to make complaints, report wrongdoing or seek redress in compliance with the revised IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations, the IFAD Policy to Prevent and Respond to Sexual Harassment, Sexual Exploitation and Abuse of 2018, and IFAD's Social, Environmental and Climate Assessment Procedures of 2021.
36. The project will establish confidential reporting mechanisms and promote these mechanisms via project communication materials and platforms, and in the course of project activities.

B. Planning, monitoring and evaluation, learning, knowledge management and communications

37. The project's monitoring and evaluation system will be based on: (i) an outcome survey conducted at the household level, with baseline, midterm and endline measurement; and (ii) a management information system that captures information on production, training, early warnings, use of climate-smart technologies and sales at the farm level.
38. A communications plan for the project will be developed and implemented by the PMU in coordination with IFAD communications specialists. Knowledge-sharing will take place primarily through digital means.

Innovation and scaling up

39. The project fosters innovation and scalability through a blend of financial support and technical assistance aimed at smallholder farmers and entrepreneurs. It incorporates an investment financing model that combines loans and grants, channelled through partner financial institutions, to support climate-smart agricultural practices and improved production. By integrating water management with agricultural innovation, the project aims to address climate challenges in irrigated agriculture. The adoption of new climate-resilient technologies will be accelerated through direct collaboration with smallholders, providing training, facilitating access to finance and strengthening the value chains of four agricultural commodities. These strategies will be scalable based on proven success, ensuring long-term sustainability and broad-based impact.

C. Implementation plans

Implementation readiness and start-up plans

40. A project implementation manual has been prepared and includes terms of reference for key service providers. The Government will be encouraged to initiate the procurement process for these service providers in advance of project effectiveness. Resources from the ongoing Project Preparation Special Fund (PPSF) grant from AIIB have been used to support this activity for CAISAR.

Supervision, midterm review and completion plans

41. CAISAR implementation will be supervised jointly by the Government, IFAD and AIIB. There will be one supervision mission and one implementation support mission per year, with a midterm review planned for mid-2028.

V. Legal instruments and authority

42. A financing agreement between the Kingdom of Cambodia and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient. A copy of the negotiated financing agreement is attached as appendix I.
43. The Kingdom of Cambodia is empowered under its laws to receive financing from IFAD.
44. I am satisfied that the proposed financing will comply with the Agreement Establishing IFAD and the Policies and Criteria for IFAD Financing.

VI. Recommendation

45. I recommend that the Executive Board approve the proposed financing in terms of the following resolution:

RESOLVED: that the Fund shall provide a loan on blend terms to the Kingdom of Cambodia in an amount of twelve million four hundred thousand special drawing rights (SDR 12,400,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

RESOLVED FURTHER: that the Fund shall provide a loan on ordinary terms to the Kingdom of Cambodia in an amount of eight million United States dollars (US\$8,000,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Alvaro Lario
President

Negotiated financing agreement

Climate Adaptive Irrigation and Sustainable Agriculture for Resilience (CAISAR)

(Negotiations concluded on 12 September 2025)

FINANCING AGREEMENT

IFAD Loan No: _____
IFAD Loan No: _____
GCF Loan No: _____
GCF Grant No: _____

Project name: *Climate Adaptive Irrigation and Sustainable Agriculture for Resilience (CAISAR)* ("the Project")

The Kingdom of Cambodia (the "Borrower/Recipient")

and

The International Fund for Agricultural Development (the "Fund" or "IFAD")

(each a "Party" and both of them collectively the "Parties")

WHEREAS the Borrower/Recipient has requested a loan and a grant from the Fund for the purpose of financing the Project described in Schedule 1 to this Agreement;

WHEREAS, the Project shall be co-financed by the Green Climate Fund ("GCF")

- A. On 24 September 2018, IFAD and the GCF concluded a Master Accreditation Agreement (the "AMA"), that entered into force on 09 November 2018 pursuant to which a Funding Activity Agreement was executed on [xxxxx] (the "FAA") setting out the terms and conditions under which the GCF will transfer the GCF Funding to IFAD for the purposes of the implementation of the Project by the Borrower/Recipient. For the avoidance of doubt, any obligation of the Borrower/Recipient stemming from the AMA or FAA shall be specifically provided in this Agreement;
- B. By its decision GCF/B.42/06 of 03 July 2025: Consideration of funding proposals, the GCF Board approved the Funding Proposal to finance CAISAR as contained in GCF doc No. GCF/B.42/FP270 dated 9 June 2025; and
- C. IFAD, in its capacity as trustee, opened a bank account to receive the GCF funds and hold them in trust (the "GCF Trust Account") and IFAD's liability in connection with this Agreement is limited to the assets of the GCF Trust Account.

WHEREAS, the Project shall be co-financed by the Asian Infrastructure Investment Bank ("AIIB")

WHEREAS, the Borrower/Recipient has undertaken to provide additional resources, financially or in kind that may be needed for the Project;

WHEREAS, the Fund has agreed to provide financing for the Project;

NOW THEREFORE, the Parties hereby agree as follows:

Section A

1. The following documents collectively form this Agreement: this document, the Project Description and Implementation Arrangements (Schedule 1), the Allocation Table (Schedule 2) and the Special Covenants (Schedule 3).

2. The Fund's General Conditions for Agricultural Development Financing dated 29 April 2009, amended as of December 2022, and as may be amended hereafter from time to time (the "General Conditions") are annexed to this Agreement, and all provisions thereof shall apply to this Agreement. For the purposes of this Agreement the terms defined in the General Conditions shall have the meanings set forth therein, unless the Parties shall otherwise agree in this Agreement.

3. The Fund shall provide to the Borrower:

- A. a loan on blended terms ("Loan A");
- B. a loan on ordinary terms ("Loan B");
- C. a loan on GCF terms ("GCF Loan"); and
- D. a grant on GCF terms ("GCF Grant"),

(Loan A and Loan B, together the "IFAD Financing", the GCF Loan and GCF Grant, together the "GCF Financing", and all together the "Financing"). The Borrower/Recipient shall use the Financing to implement the Project in accordance with the terms and conditions of this Agreement. In providing the GCF Financing, IFAD shall act in its capacity as trustee of the GCF Trust Account.

4. In the event of a conflict between the General Conditions and the Financing Agreement, the latter shall prevail.

Section B

1. The amount of:

- A. Loan A is twelve million four hundred thousand Special Drawing Rights (SDR 12 400 000);
- B. Loan B is eight million United States dollars (USD 8 000 000);
- C. the GCF Loan is forty million United States dollars (USD 40 000 000); and
- D. the GCF Grant is forty million United States dollars (USD 40 000 000).

2. The Fund shall credit the amount of the GCF Loan and GCF Grant into the respective GCF Loan account and the GCF Grant account (the "GCF Accounts") only when the funds have been received from the GCF. Any withdrawals from the GCF Accounts shall be subject to the condition that sufficient funds for the Project shall have been received by the Fund from the GCF and deposited in the GCF Accounts to cover the withdrawal and that the Fund shall have been notified of such transfer and deposit in writing. The Fund shall have no obligation to extend financial assistance to the Borrower/Recipient under this Agreement for the purpose of the Project if no funds are available in the GCF Accounts for the Project.

3. A. IFAD Loan A is granted on blend terms, and shall be subject to interest on the principal amount outstanding and a service charge as determined by the Fund at the date of approval of the Loan by the Fund's Executive Board. The interest rate and service charge determined will be fixed for the life cycle of the loan and payable semi-annually in the Loan Service Payment Currency, and shall have a maturity period of twenty-five (25) years, including a grace period of five (5) years starting from the date of approval of the Loan by the Fund's Executive Board. The principal of the Loan granted on blend terms will be repaid in equal instalments.
- B. IFAD Loan B is granted on ordinary terms and shall be subject to interest on the principal amount outstanding of the Loan, at a rate equal to the IFAD Reference Interest Rate including a variable spread, payable semi-annually in the Loan Service Payment Currency, and have a maturity period of 20 (twenty) years, including a grace period of 5 (five) years starting from the date as of which the Fund has determined that all general conditions precedent to withdrawal have been fulfilled.
- C. The GCF Loan is extended on the terms set out below:
- i. **Maturity period:** twenty (20) years from the date of entry into force of this Agreement;
 - ii. **Grace period:** five (5) years from the date of entry into force of this Agreement;
 - iii. **Interest rate:** zero point seventy-five per cent (0.75%) per annum;
 - iv. **Principal repayment amount:** Annual equal instalments in the amount equivalent to six point seven per cent (6.7%) of the principal amount disbursed, on 15 June and 15 December of each year during the principal repayment period;
 - v. **Principal repayment period:** Fifteen (15) years starting from the end of the relevant grace period;
 - vi. **Commitment fee:** zero point seventy-five per cent (0.75%) per annum, calculated over the amount of the GCF Loan not yet disbursed by the Accredited Entity (IFAD) to the Borrower. The commitment fee shall start accruing from the date of entry into force of this Agreement and shall be paid semi-annually on 15 June and 15 December each calendar year. No grace period shall apply to the payment of the commitment fee;
 - vii. **Service fee:** The service fee shall be payable semi-annually on 15 June and 15 December each calendar year at a rate of zero point five per cent (0.5%) per annum on the principal amount outstanding of the GCF Loan. The GCF Loan service fee shall apply from the date of each disbursement of the GCF Loan by the Fund. No grace period will apply to the payment of the service fee; and
 - viii. **Taxes:** Should the Borrower/Recipient be compelled to make any deductions in respect of any present or future taxes, duties, charges, fees and withholdings or any other deductions, it will pay to the Fund such additional amounts as are necessary to ensure receipt by the Fund of the full amount which the Fund would have received but for the deduction;
 - ix. **Pari Passu Treatment:** GCF Loan will rank pari passu with the IFAD Loan and AIIB Loan. GCF Loan will benefit from the preferred creditor status in the same manner as the IFAD Loan.
4. The Financing Service Payment Currency shall be in United States dollars (USD).

5. The first day of the applicable Fiscal Year shall be 1 January.
6. Payments of principal, and interest and service charge on IFAD Financing shall be payable on 15 June and 15 December of each year.
7. There shall be four Designated Accounts in USD, one for each funding source, for the exclusive use of the Project opened in the National Bank of Cambodia. The Borrower shall inform the Fund of the officials authorized to operate the Designated Accounts.
8. There shall be two Project Accounts in USD for the benefit of MOWRAM and NCDD-S in the local commercial Bank authorized by MEF to receive funds from the Designated Accounts.
9. The Borrower/Recipient shall provide counterpart financing for the Project in the amount of fifteen million United States dollars (USD 15 000 000) in the form of in-kind contribution.

Section C

1. The Lead Project Agency shall be the Ministry of Water Resources and Meteorology (MOWRAM).
2. Additional Project Parties are described in Schedule 1 Part II, paragraph 6.
3. A Mid-Term Review will be conducted as specified in Section 8.03 (b) and (c) of the General Conditions, however the Parties may agree on a different date for the Mid-Term Review of the implementation of the Project.
4. The Project Completion Date shall be the seventh (7th) anniversary of the date of entry into force of this Agreement and the Financing Closing Date shall be 6 months later, or such other date as the Fund may designate by notice to the Borrower/Recipient.
5. Procurement of goods, works and services financed by the Financing shall be carried out:
 - (a) in accordance with the provisions of the Borrower/Recipient's procurement regulations, to the extent such are consistent with the IFAD Procurement Guidelines.

Section D

1. The Fund will administer the Financing and supervise the Project.
2. As of the date of entry into force of this Agreement, the Borrower/Recipient represents and warrants that:
 - a. during the implementation of the Project, it complied with all the applicable legislative and regulatory provisions with regards to the fight against money laundering, corruption and the financing of terrorism and the identification of customers, and carried out other similar verifications to which it may be required with regard to its legislative and regulatory provisions;
 - b. where applicable, it shall make available the proceeds of the Loan/Grant available to the Executing Agencies or to any Project Party, as defined in Section

C of this present Agreement, in accordance with the eligibility criteria set out in the Project Implementation Manual (PIM);

- c. it understands and accepts that the Fund may invite representatives of the GCF to participate in the supervision and other similar missions carried out by the Fund;
 - d. it understands and accepts that the GCF, in coordination with the Fund, may, at its own expense, i) carry out occasional audits on the use of the Financing; ii) conduct ex post impact assessments; and/or iii) request the inclusion of impact assessment requirements;
 - e. it shall cooperate with IFAD and GCF in the event that GCF or a third party appointed by GCF assumes the contractual role of IFAD based on the terms of this Agreement;
 - f. it understands and accepts that an independent auditor selected by IFAD shall conduct interim and final independent audit reports for the purposes of measuring the performance of the Project;
 - g. it understands and accepts that a major restructuring of the Project may result in the GCF or IFAD requesting a new letter of no objection or new approvals from the relevant authority, or both, as applicable;
 - h. any branding activity, including the use of either IFAD or GCF's name, mark, symbol or logo in any reports, publications, news media or related publicity materials as well as any other form of public information must be agreed in writing by IFAD and GCF;
 - i. it is duly authorized, and has the capacity to enter into this Agreement and that this Agreement is legally binding on and enforceable against the Recipient in accordance with its governing law;
 - j. it shall have no right of action, whether in contract, tort or under statute to the extent permitted by law, against the GCF, including Board members, alternate Board members, the Executive Director, Staff and Experts, and/or any other person acting on behalf of the GCF in respect of the GCF Trust Account, the Grant/Loan or any loss or damage arising out of IFAD's acts or omissions, or the acts or omissions of its officers, employees, agents or consultants under or in connection with the implementation of the Financing;
 - k. to the extent permitted by applicable laws and regulations, any reductions in greenhouse gas emissions achieved during the Project must not be converted into offset credits or units generated thereby, or if so converted, will be retired without allowing any other emissions of greenhouse gases to be offset; and
 - l. the Fund may, upon request from the GCF furnish an executed copy of this Agreement.
3. On the date of entry into force of this Agreement, the Borrower/Recipient undertakes that it shall:
- a. obtain, from any sub-recipient of a disbursement of the Financing under this Agreement, an undertaking that the funds will not be used for purposes inconsistent with this Agreement, the FAA or the laws applicable to sub-recipients; provisions may also be included in any agreement with third parties participating in the Project – to take into account the obligations described in paragraph 2(a) of Section D above;

- b. obtain or contractually require that the Parties to the Project or the third parties participating in it obtain all necessary and applicable licenses, approvals and consents to implement the Project, all of which must be maintained in full force and effect throughout the Project implementation period;
- c. promptly inform IFAD of any credible and material risk or other indications of money laundering or terrorist financing, or both, in connection with the Project, and that it must immediately execute the measures recommended by IFAD;
- d. include in its agreements with third parties participating in the execution of the Project the obligation to procure or reimburse all unused resources of the Financing;
- e. ensure that the concessionality of the GCF Loan is passed on to sub-borrowers which may be carrying out new on-lending activities to the final beneficiaries;
- f. provide IFAD with periodic performance reports in a form and substance satisfactory to IFAD, as well as semi-annual and annual financial reports to be submitted, concerning sub-loans, until the last sub-loan is fully repaid;
- g. ensure that all financial information related to the Funding and contributions from other co-financers is recorded by funding source, expenditure category, components, sub-components, and activities. Financial reports will also include certified semi-annual reports on the use of funds by funding source, expenditure category, components, sub-components, and activities.

Section E

1. The following are designated as additional grounds for suspension of this Agreement:
 - (a) The PIM and/or any provision thereof, has been waived, suspended, terminated, amended or modified without the prior agreement of the Fund and the Fund, after consultation with the Borrower/Recipient, has determined that it has had, or is likely to have, a material adverse effect on the Project.
 - (b) The GCF has decided to suspend payments to IFAD, including but not limited to the GCF Financing, pursuant to the terms of the FAA; and
 - (c) The GCF has terminated the AMA or FAA.
2. The following are designated as additional grounds for cancellation of this Agreement:
 - (a) In the event that the Borrower/Recipient did not request a disbursement of the Financing for a period of at least twelve (12) consecutive months without justification subsequent to the first eighteen (18) months from the date of entry into force of the Agreement; and
 - (b) In the event that the Borrower/Recipient did not request a disbursement of the full amount of the GCF Financing, or the Fund has not otherwise (i) disbursed the full amount of the GCF Financing proceeds; or (ii) received the full amount of the GCF Financing proceeds in its GCF Accounts, the Fund shall be entitled to cancel the undisbursed portion of the GCF Financing.

3. The following are designated as additional specific conditions precedent to withdrawal:

- (a) The IFAD no objection to the Project Implementation Manual (PIM) shall have been obtained.
- (b) Key Project staff has been appointed as per section 8 of Schedule 1 of this Agreement.
- (c) The Borrower shall open four designated accounts exclusively for the use of project funds.
- (d) The Borrower shall register with the IFAD Client Portal (ICP) to submit quarterly reports and Withdrawal Applications.
- (e) Under the GCF Loan:
 - i. delivery, to the Fund, of the pipeline of projects funded under Component 1,2&3 during the period for which a withdrawal is requested.

4. The following are the designated representatives and addresses to be used for any communication related to this Agreement:

For the Borrower/Recipient:

Director General
General Department of International Cooperation and Debt Management
Ministry of Economy and Finance
St.92 Sangkat Wat Phnom, Khan Daun Penh
Phnom Penh, Cambodia

For the Fund:

The President
International Fund for Agricultural Development
Via Paolo di Dono 44
00142 Rome, Italy

Copy to: Frew Behabtu

If applicable, the Parties accept the validity of any qualified electronic signature used for the signature of this Agreement and recognise the latter as equivalent to a hand-written signature.

This Agreement, [dated _____]¹, has been prepared in the English language in two (2) original copies, one (1) for the Fund and one (1) for the Borrower/Recipient.

KINGDOM OF CAMBODIA

Dr. Aun Pornmoniroth
Deputy Prime Minister,
Ministry of Economy and Finance

Date: _____

INTERNATIONAL FUND FOR
AGRICULTURAL DEVELOPMENT

Alvaro Lario
President of IFAD

Date: _____

¹ To be kept only if the FA is signed by both parties the same date in the same location.

Schedule 1

Project Description and Implementation Arrangements

I. Project Description

1. *Target Population.* The Project shall benefit approximately 1, 700,000 beneficiaries of which 562,000 are direct beneficiaries (225,000 women), across a 32,000 ha irrigated area.
2. *Project area.* The Project will be implemented in Kampong Speu, Kampong Chhnang, Kandal, Pursat the "Project Area").
3. *Goal.* The overall goal of the Project is to make the agriculture sector in Cambodia climate resilient and sustainable.
4. *Objectives.* The specific objective of the Project is to modernize the irrigation sector by upgrading resilient irrigation systems and enable farmers to adapt to climate risks and mitigate crop emissions through use of energy- and water-efficient technologies and practices, timely weather information and improved market integration.
5. *Components.* The project's results will be achieved through the implementation of three components.:
 - 5.1 **Component 1: Farm-level Climate Adaptation** - Improved crop-water management; climate-smart value chains (rice, vegetables, poultry, aquaculture); rural-road upgrades; and expanded agro-meteorological services.
 - 5.2. **Component 2: Upgrading and climate-proofing water infrastructure for increased resilience** - Modernized irrigation schemes and ponds; strengthened flood-proofing and drainage; and establishment and training of Farmers Water User Communities.
 - 5.3 **Component 3. Strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways** - Enhanced capacity of Executing Entity for low-emission, climate-resilient irrigation governance and water-resources management.

II. Implementation Arrangements

6. *Lead Project Agency.* The Lead Project Agency shall be the Ministry of Water Resources and Meteorology_(MOWRAM) and the National Committee for Sub-National Democratic Development Secretariat (NCDDS).
7. *Project Steering Committee.* A Project Steering Committee (PSC) will be established for inter-ministerial coordination. The role of the PSC, chaired by the minister of MoWRAM, is primarily to provide strategic oversight of the project's overall progress toward its intended goals and outcomes, to make decisions regarding the project's overall directions, and to address high-level issues and risks that are beyond the immediate control of the project. The PSC makes decisions based on consensus. It will be chaired by the Minister of MOWRAM and comprise of senior officials from MOWRAM, the Ministry of Economy and Finance (MEF), the Ministry of Interior (MOI) which is responsible for the NCDDS, Ministry of Agriculture, Forestry and Fisheries (MAFF), Ministry of Environment (MOE), and the Provincial Governor's Offices of Pursat, Kampong Chhnang, Kandal, and Kampong Speu provinces. An Inter-Ministerial Resettlement Committee (IRC), chaired by MEF, will manage resettlement and land acquisition issues where they arise. The National Project Director of the Project Management Unit (PMU) will serve as a secretariat to the PSC.

8. *Project Management Unit.* MOWRAM will establish a Project Management Unit (PMU) for the implementation of the CAISAR project. The PMU will be led by the Secretary of State (MOWRAM) as the National Project Director (NPD) and managed by an appointed National Project Manager (NPM). The NPM will be responsible for overall project management and coordination. Within the PMU, project-recruited staff and staff seconded by the government will collectively comprise a project delivery team that will ensure sound and effective project implementation. The PMU will also include an Operations Officers, Gender Specialist, Finance Officer, Administration Officer, Procurement Officer and Monitoring and Evaluation Officer. Consulting firms and individual consultants will be recruited to support the project implementation and undertake detailed design services and construction supervision. Start-up orientation sessions will be organized to orient staff with regards to the procedures of GCF, IFAD and AIIB. Capacity building sessions in understanding the procurement, financial management and monitoring and evaluation sessions will be held as needed.

The Project Management Unit will consist of personnel from MOWRAM, the Department of Hydrology and River Works (DHRW) of MOWRAM, and Provincial Departments of Water Resources and Meteorology (PDWRAMs) of the four provinces in which the Project will be implemented. The PDWRAMs will be responsible for coordinating all field activities with Farmer Water User Committees (FWUCs). The Department of Farmer Water User Committees (DFWUC) has personnel at the central level but no office or personnel at the Province and District level. For the effective operation of the committees, the Department of FWUC will appoint additional personnel at the provincial and district levels.

The PMU will be responsible for the overall management of the Project; it will coordinate directly with EEs and project stakeholders, be responsible for providing support to the execution of day-to-day activities and be responsible for the technical quality of the project outputs, activities, financial management, procurement, monitoring and evaluation.

9. *Implementing partners.* The MOWRAM PMU will be responsible for the overall management of the Project; it will coordinate directly with EEs and project stakeholders, be responsible for providing support to the execution of day-to-day activities and be responsible for the technical quality of the project outputs, activities, financial management, procurement, monitoring and evaluation. The National Committee for Sub-National Democratic Development Secretariat (NCDDS) will be responsible for the implementation of Component 1 and output 3.2 under component 3 and will establish a Project Implementation Unit and contract Service providers at the provincial level as required. The PMU will be directly responsible for the implementation of Component 2 (irrigation infrastructure) and output 3.1 under Component 3. There will be monthly coordination between MOWRAM and NCDDS to ensure the synergies between the various components.

10. *Monitoring and Evaluation.* Project-level monitoring and evaluation will be undertaken to meet the information needs of the key financing and implementing agencies and will be in compliance with IFAD, GCF, AIIB and RGC policies. As the main implementing agency, MOWRAM will ensure the existence of a well-designed, operational and effective supervision, monitoring and reporting system to analyze and quantify the causal and attributable change of the Project. In particular, the monitoring and reporting system will cover all project components. MOWRAM will be responsible for coordinating and preparing a consolidated report for submission to all key stakeholders through the Project Steering Committee.

The monitoring of CAISAR will involve (i) process monitoring; (ii) monitoring of the implementation of Resettlement Plan; (iii) monitoring progress in construction of civil works; (iv) monitoring of the implementation of Environment Management Plan; (v) gender and social dimension monitoring, (vi) monitoring of the implementation of capacity building/training plan; and (vii) monitoring of compliance with loan covenants. M&E forms/matrices shall be developed for each of these aspects.

The M&E Specialist in the Project Management Unit will coordinate and consolidate all reports from different implementing partners including a M&E Specialist in the NCDDDS PIU and will be responsible for transmitting annual progress reports to IFAD, AIIB and the GCF Secretariat. GCF will be provided the following reports: i) an inception report; ii) Annual Performance Reports (APRs); iii) an interim evaluation; and iv) a terminal evaluation. The PMU, with the support of the PMIC, will provide six-monthly updates/reports on the project's implementation and performance which will be consolidated to provide APRs. The status of achievement of deliverables of activities/ sub-activities, and performance targets of the project's outputs will be provided in the six-monthly updates. AIIB/GCF/IFAD teams will coordinate with the PMU and the PIUs through regular progress meetings. The team will also conduct quarterly, six-monthly or annual review missions as required. The corrective actions will be agreed with the executing entity and recorded and subsequently implemented by the EE and monitored by AIIB/GCF/IFAD.

11. *Knowledge Management.* The CAISAR Project will aims to enhance climate adaptation and improve livelihoods among Cambodian farmers by addressing key challenges such as limited knowledge of climate-resilient practices, inadequate access to credit and market information, and weak extension services. Through a robust Knowledge Management (KM) strategy, the Project will generate and disseminate practical, high-quality knowledge products, build capacity among agricultural officers and mechanization service providers, and promote climate-smart technologies like Mechanized Dry Seeded Rice (mDSR). Key deliverables include training materials, workshops, a mobile platform for service coordination, and a network of engaged service providers, all designed to ensure sustainability, relevance, and impact.

12. *Project Implementation Manual.* The **Project Implementation Manual (PIM)** for the CAISAR Project will serves as a comprehensive guide for project implementation, primarily intended for use by the Project Management Unit and Implementing Units. It supports the achievement of the Project Development Objective and Outcomes as outlined in the Project Design Report and Financing Agreement between the IFAD, AIIB and GOC. The PIM outlines the project's implementation structure, planning processes, eligible fund usage, and operational rules—including sub-project selection, environmental and social safeguards, financial management, procurement, monitoring, evaluation, and reporting.

Schedule 2

Allocation Table

1. *Allocation of Loan/Grant Proceeds.* (a) The Table 1 below sets forth the Outcomes of Eligible Expenditures to be financed by the Loan/Grant and the allocation of the amounts to each Outcome of the Financing and the percentages of expenditures for items to be financed in each Outcome:

Outcome	IFAD Loan A Amount Allocated (expressed in SDR)	IFAD Loan B Amount Allocated (expressed in USD)	GCF Loan Amount Allocated (expressed in USD)	GCF Grant Amount Allocated (expressed in USD)	Percentage
Outcome 1: Farm Level Climate Adaptation and Resilience	9 430 000			26 323 000	100*
Outcome 2: Upgrading and climate-proofing water infrastructure for increased resilience	500 000	8 000 000	39 000 000	3 300 000	100*
Outcome 3: Strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways	-			8 670 000	100*
Outcome 4: Project monitoring & evaluation	2 470 000		1 000 000	1 707 000	100*
TOTAL	12 400 000	8 000 000	40 000 000	40 000 000	

* The Percentage is applied to Project expenditures, excluding indirect taxes and shares of other financiers).

In Table 2 below, eligible outputs expenditures are presented for each Outcome shown in Table 1.

Table 2. Eligible output expenditures

Outcome	IFAD Loan A	IFAD Loan B	GCF Loan	GCF Grant
Outcome 1: Farm Level Climate Adaptation and Resilience	Output 1.1			Output 1.1, 1.2, 1.3, 1.4
Outcome 2: Upgrading and climate-proofing water infrastructure for increased resilience	Output 2.2	Output 2.2	Output 2.2, 2.3	Output 2.4
Outcome 3: Strengthened institutional and regulatory capacity for low-emission climate-resilient development pathways				Output 3.1, 3.2
Outcome 4: Project monitoring & evaluation	Output 4 (PM)		Output 4 (PM)	Output 4 (PM)

(b) *Audit arrangements.* The audit report shall be submitted to IFAD within six months following the end of the fiscal year and shall include additional agreed-upon procedures in accordance with GCF requirements and shall provide an assessment of the information necessary for reporting to the GCF.

Schedule 3

Special Covenants²

I. General Provisions

In accordance with Section 12.01(a)(xxiii) of the General Conditions, the Fund may suspend, in whole or in part, the right of the Borrower/Recipient to request withdrawals from the Loan/Grant Account if the Borrower/Recipient has defaulted in the performance of any covenant set forth below, and the Fund has determined that such default has had, or is likely to have, a material adverse effect on the Project:

1. Within 6 months of entry into force of the Financing Agreement, the Project will procure and install a customize accounting software as it is the practice in IFAD on-going supported projects, to satisfy international Accounting Standards and IFAD's requirements.
2. Within six (6) months of entry into force of the Financing Agreement, the Project will enter into Memorandum of Understandings (MoU) with implementing partners that will structure the collaboration, define roles, responsibilities and duties with regards to implementation, financial management, accounting and reporting.
3. *Planning, Monitoring and Evaluation.* The Borrower/Recipient shall ensure that a Planning, Monitoring and Evaluation (PM&E) system shall be established within twelve (12) months from the date of entry into force of this Agreement.
4. *Gender.* The Borrower/Recipient shall ensure that
 - (a) 40 % of the beneficiary of the project activities will be women baring the heavy work like construction of the irrigation facilities.
 - (b) Mechanisms such as women's business associations are strengthened adequately to promote women entrepreneurship, access to business-related information, green technology and financial services for women.
 - (c) The women participation is adequate in Farmers Water User Committees (FWUC) leadership positions (preferably 40 %).
 - (d) Proper mitigation measures are taken in case of Gender Based Violence.
 - (e) Gender officer is included in PMU and the Gender Action plan is prepared within twelve (12) months from the date of entry into force of this Agreement.
5. *Indigenous People Concerns.* The Borrower/Recipient shall ensure that the concerns of IPs are given due consideration in implementing the Project and, to this end, shall ensure that:
 - (a) the Project is carried out in accordance with the applicable provisions of the relevant IP national legislation;
 - (b) indigenous people are adequately and fairly represented in all local planning for project activities;
 - (c) IP rights are duly respected;
 - (d) IP communities, participate in policy dialogue and local governance;
 - (e) The terms of Declarations, Covenants and/or Conventions ratified by the Borrower on the subject are respected³;

² To be agreed with Negotiation team which to include and adapt wording to each specific negotiation.

³ Refer to ILO 169, 1989 when ratified.

- (f) The Project will not involve encroachment on traditional territories used or occupied by indigenous communities.
6. *Land tenure security.* The Borrower/Recipient shall ensure that the land acquisition process has already been completed and that compensation processes were consistent with international best practice and free prior and informed consent principles as stated in the approved Land Acquisition and Resettlement Planning Framework (LARPF) dated, March 22, 2024.
7. *Anticorruption Measures.* The Borrower/Recipient shall comply with IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations.
8. *Sexual Harassment, Sexual Exploitation and Abuse.* The Borrower/Recipient and the Project Parties shall ensure that the Project is carried out in accordance with the provisions of the IFAD Policy on Preventing and Responding to Sexual Harassment, Sexual Exploitation and Abuse, as may be amended from time to time.
9. Use of Project Vehicles and Other Equipment. The Borrower shall ensure that:
- (a) all vehicles and other equipment procured under the Project are allocated to the Implementing Agencies for Project implementation;
 - (b) The types of vehicles and other equipment procured under the Project are appropriate to the needs of the Project; and
 - (c) All vehicles and other equipment transferred to or procured under the Project are dedicated solely to Project use.
10. Ifad Client Portal (ICP) Contract Monitoring Tool. The Borrower/Recipient shall ensure that a request is sent to IFAD to access the project procurement Contract Monitoring Tool in the IFAD Client Portal (ICP). The Borrower/Recipient shall ensure that all contracts, memoranda of understanding, purchase orders and related payments are registered in the Project Procurement Contract Monitoring Tool in the IFAD Client Portal (ICP) in relation to the procurement of goods, works, services, consultancy, non-consulting services, community contracts, grants and financing contracts. The Borrower/Recipient shall ensure that the contract data is updated on a quarterly basis during the implementation of the Project.
- 11 The Key Project Personnel are: Project Manager, Financial Specialist, Officer for Monitoring and Evaluation, Knowledge Management Officer, Administration Officer, Procurement Officer, Social Inclusion and Gender Specialist, and Environment and Climate Assessment Specialist. In order to assist in the implementation of the Project, the PIU/PMU, unless otherwise agreed with IFAD, shall employ or cause to be employed, as required, key staff whose qualifications, experience and terms of reference are satisfactory to IFAD. Key Project Personnel shall be seconded to the PIU/PMU in the case of government officials or recruited under a consulting contract following the individual consultant selection method in the IFAD Procurement Handbook, or any equivalent selection method in the national procurement system that is acceptable to IFAD. The recruitment of Key Project Personnel is subject to IFAD's prior review as is the dismissal of Key Project Personnel. Key Project Personnel are subject to annual evaluation and the continuation of their contract is subject to satisfactory performance. Any contract signed for Key Project Personnel shall be compliant with the national labour regulations or the ILO International Labour Standards (whichever is more stringent) in order to satisfy the conditions of IFAD's updated SECAP. Repeated short-term contracts must be avoided, unless appropriately justified under the Project's circumstances.

II. SECAP Provisions⁴

1. The Borrower/Recipient shall carry out the implementation of the Project in accordance with the measures and requirements set forth in the Environmental and Social Impact Assessment (ESIA), the Environmental, Social and Climate Management Framework (ESCMF), Land Acquisition and Resettlement Planning Frameworks (LARPF), the Environmental, Social and Climate Management Plans (ESCMPs), Indigenous Peoples Planning Framework (IPPF), and the Gender Action and Social Inclusion Plan (the "Management Plan(s)"), as applicable, taken in accordance with SECAP requirements and updated from time to time by the Fund.

The Borrower/Recipient shall not amend, vary or waive any provision of the Management Plan(s), unless: (i) agreed in writing by the Fund and (ii) Borrower/Recipient has complied with the requirements applicable to the original adoption of the Management Plan(s).

2. The Borrower/Recipient shall not, and shall cause the Executing Agency, all its contractors, its sub-contractors, and suppliers] not to commence implementation of any works, unless all Project affected persons have been compensated and/or resettled in accordance with the specific Resettlement Standard Operating Procedures (LAR SOP, 2018), the Detailed Resettlement Plan (DRP)/ or the agreed works and compensation schedule.

3. The Borrower/Recipient shall disclose the draft and final ESIA reports and all other relevant Management Plan(s) with Project stakeholders and interested parties in an accessible place in the Project-affected area, in a form and language understandable to Project-affected persons and other stakeholders. The disclosure will take into account any specific information needs of the community (e.g. culture, disability, literacy, mobility or gender).

4. The Borrower/Recipient shall ensure or cause the Executing Agency and Implementing Agency to ensure that all bidding documents and contracts for goods, works and services contain provisions that require contractors, sub-contractors and suppliers to comply at all times in carrying out the Project with the standards, measures and requirements set forth in the SECAP 2021 Edition and the Management Plan(s), if any.

5. This section applies to any event which occurs in relation to serious environmental, social, health & safety (ESHS) incidents (as this term is defined below); labor issues or to adjacent populations during Project implementation that, with respect to the relevant IFAD Project:

- (i) has direct or potential material adverse effect;
- (ii) has substantially attracted material adverse attention of outside parties or create material adverse national press/media reports; or
- (iii) gives rise to material potential liabilities.

In the occurrence of such event, the Borrower/Recipient shall:

- Notify IFAD promptly;
- Provide information on such risks, impacts and accidents;
- Consult with Project-affected parties on how to mitigate the risks and impacts;
- Carry out, as appropriate, additional assessments and stakeholders' engagements in accordance with the SECAP requirements; and

⁴ New SECA provisions for all projects that pass concept review after 1 September 2021.

- Adjust, as appropriate, the Project-level grievance mechanism according to the SECAP requirements; and
- Propose changes, including corrective measures to the Management Plan(s) (if any), in accordance with the findings of such assessment and consultations, for approval by IFAD.

Serious ESHS incident means serious incident, accident, complaint with respect to environmental, social (including labor and community), health and safety (ESHS) issues that occur in the context of the loan or within the Borrower/Recipient's activities. Serious ESHS incidents can comprise incidents of (i) environmental; (ii) occupational; or (iii) public health and safety; or (iv) social nature as well as material complaints and grievances addressed to the Borrower/Recipient (e.g. any explosion, spill or workplace accident which results in death, serious or multiple injuries or material environmental contamination, accidents of members of the public/local communities, resulting in death or serious or multiple injuries, sexual harassment and violence involving Project workforce or in relation to severe threats to public health and safety, inadequate resettlement compensation, disturbances of natural ecosystems, discriminatory practices in stakeholder consultation and engagement (including the right of indigenous peoples to free, prior and informed consent), any allegations that require intervention by the police/other law enforcement authorities such as loss of life, sexual violence or child abuse, which (i) have, or are likely to have a material adverse effect; or (ii) have attracted or are likely to arouse substantial adverse attention of outside parties; or (iii) to create substantial adverse media/press reports; or (iv) give, or are likely to give rise to material potential liabilities).

6. The Borrower/Recipient shall ensure [or cause the Executing Agency, Implementing Agency, contractors, sub-contractors and suppliers to ensure] that the relevant processes set out in the SECAP 2021 Edition as well as in the Management Plan(s) (if any) are respected.

7. Without limitation on its other reporting obligations under this Agreement, the Borrower/Recipient shall provide the Fund with:

- Reports on the status of compliance with the standards, measures and requirements set forth in the SECAP 2021 Edition, ESCMPs and the management plan (if any) on a semi-annual basis - or such other frequency as may be agreed with the Fund;
- Reports of any social, environmental, health and safety incidents and/accidents occurring during the design stage, the implementation of the Project and propose remedial measures. The Borrower/Recipient will disclose relevant information from such reports to affected persons promptly upon submission of the said reports; and
- Reports of any breach of compliance with the standards, measures and requirements set forth in the SECAP 2021 Edition and the Management Plan(s) (if any) promptly after becoming aware of such a breach.

8. In the event of a contradiction/conflict between the Management Plan(s), if any, and the Financing Agreement, the Financing Agreement shall prevail.

Logical framework

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Outreach	1 Persons receiving services promoted or supported by the project				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	Rural farmers are receptive to the services provided by the project; and the Farmer Water User Communities (FWUCs) support the outreach programs
	Males - Males	0	378172	709072				
	Females - Females	0	252115	866644				
	Young - Young people	0	63029	315143				
	Indigenous people - Indigenous people	0	12606	31514				
	Total number of persons receiving services - Number of people	0	630287	1575716				
	Male - Percentage (%)	0	60	45				
	Female - Percentage (%)	0	40	55				
	Young - Percentage (%)	0	10	20				
	1.b Estimated corresponding total number of households members				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	
	Household members - Number of people	0	6302687	1575716				
	1.a Corresponding number of households reached				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	
	Women-headed households - Households	0	75034	187586				
	Non-women-headed households - Households	0	75034	187586				
Households - Households	0	150068	375171					
Project Goal The goal of the project is to make the agriculture sector in Cambodia climate	Enhanced food security				Project MIS; project GIS mapping; and outcome survey	Annual	Project Management Unit (PMU), supported by Project	The project impact on rural poverty has direct impact to national rural poverty
	Number of beneficiaries with	0	56000	1340000				

<p>resilient and sustainable</p>	enhanced – food security (people)						Implementation Units (PIUs)	percentage Global economic slowdown and/or global reduction in demand does not affect growth As outlined in the EX-ACT Annex
	Male		28000	67200				
	Female		28000	67200				
	GHG emissions reduced, avoided or removed/sequestered				Household surveys, EX-ACT	Annual	PMU, supported by FAO and IFAD	
	GHG Emissions reduced by year 7 - tCO2eq - Number	0	45750.34	213501.58				
	Beneficiaries adopting improved and/or new climate-resilient livelihood options				Project MIS; project GIS mapping; and outcome survey	Project completion	PMU and PIUs and their project implementation consultants, and individual survey consultants	Catastrophic flooding or drought, vastly exceeding the vulnerability and climate risk assessments does not occur
	Total number of people - Number of people		75000	192000				
	Male		33000	83200				
	Female		42000	108800				
	Increase in annual rice production with increase in HH income				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	Catastrophic flooding or drought, vastly exceeding the vulnerability and climate risk assessments does not occur
% yield increase for rice in targeted HH benefiting directly from the project - Percentage (%)	0	15	30					
% yield increase for vegetables in targeted HH benefiting directly	0	10	20					

Development Objective
The objective of the project is to modernize the irrigation sector by installing resilient irrigation systems and enable farmers to adapt to climate risks and mitigate crop emissions through use of energy- and water-efficient technologies and practices, timely weather information and improved market integration

Outcome
1. Reduction in crop losses and improved (agricultural) production

	from the project - Percentage (%)							
	% decrease in post-harvest losses for rice in targeted HH benefiting directly from the project - Percentage (%)	0	10	20				
	% decrease in post-harvest losses for vegetables in targeted HH benefiting directly from the project - Percentage (%)	0	15	30				
Output 1.1 Increased farmer capacity in climate resilient agriculture	3.2.1 Tons of Greenhouse gas emissions (tCO2e) avoided and/or sequestered				Project MIS; household surveys; EX-ACT	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	
	Hectares of land - Area (ha)	0	22046	22046				
	tCO2e/20 years - Number	0	45750	1006507				
	tCO2e/ha - Number	0	2.1	45.7				
	tCO2e/ha/year - Number	0	0.8	2.3				
	Farmers trained in climate smart agriculture				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)
	Total number of farmers (male and female) trained in CR technologies through the FFS training programme - Number of people	0	20000	40000				
	Number of trainers (male and female) trained to demonstrate and propagate the CR technologies and practices to farmers - Number of people	0	100	200				
	Percentage of farmers adopting climate resilient farming practices promoted by the project - Percentage (%)	0	50	80				

	Average percentage of beneficiaries who are satisfied with the knowledge gained from the trainings provided - Percentage (%)	0	70	90				
Output 1.2 Climate adaptive value chains developed by 4Ps and increased access to finance	Value chains developed by 4Ps and increased access to finance				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	a. Beneficiaries apply some or all of the climate adaptation measures every cropping season during the project; b. access to the credit line only; and c. local authority engagement defined by monthly contact with the CCs during the project
	Number of farming households benefiting from the 4P model through increased access to finance - Number	0	14000	28000				
	Number of MSMEs with increased access finance due to the linkages facilitated by the 4P model - Number	0	50	120				
Output 1.3 Increased access to and use of climate information and advisory services for climate responsive water-use and crop planning	3.1.2 Persons provided with climate information services				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	a. Beneficiaries apply some or all of the climate adaptation measures every cropping season during the project; b. access to the credit line only; and c. local authority engagement defined by monthly contact with the CCs during the project.
	Males - Males	0	168827	337654				
	Females - Females	0	112441	225103				
	Young - Young people	0	28138	56276				
	Persons provided with climate information services - Number of people	0	281378	562756				
	Hydromet station installed for improved Climate Data and Warning				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	authority engagement defined by monthly contact with the CCs during the project.
	Number of hydromet stations and agrometeorological stations rehabilitated - Number	0	5	10				
Output 1.4 Increased resilience of farm road infrastructure to climate change	2.1.5 Roads constructed, rehabilitated or upgraded				Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	Catastrophic flooding or drought, vastly exceeding the vulnerability and climate risk
	Length of roads - Km	0	5	90				

	Roads constructed, rehabilitated or upgraded cont	Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	assessments does not occur.
	farmers benefiting from improved road connectivity in the project areas - Number	0	5000	10683	
Outcome 2. Rehabilitated/upgraded, climate proofed, and modernized irrigation infrastructure for increased resilience	1.2.1 Households reporting improved access to land, forests, water or water bodies for production purposes	Project MIS; household surveys		Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	
	Households reporting improved access to water - Percentage (%)	0	8	30	
	Size of households reporting improved access to water - Number of people	0	30000	135000	
	Women-headed households - Households	0	4125	16500	
	Total no. of households reporting improved access to water - Households	0	8250	33000	
		Modernization of irrigation scheme and ponds	Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)
Output 2.1 Modernized irrigation schemes and ponds	Area provided with irrigation services - Improved - Area (ha)	0	10000	22051	
	6 Irrigation schemes finalised of rehabilitated/upgraded, climate proofed, and modernized - Percentage (%)	0	2	6	
Output 2.2 Flood-proofing and drainage improvement	Flood-proofing and Drainage improvements	Project MIS; household surveys	Annual	Project Management Unit (PMU), supported by Project Implementation Units (PIUs)	
	Area provided with drainage services - Improved - Area (ha)	0	5000	10005	
	Polder detailed design and procurement - Number	0	1	2	
Output 2.3 Farmers Water User	Establishments and training of Farmers Water User Communities (FWUC)	Project MIS, GIS	Annual	PMU	

Outcome 3: Enhanced environmental governance Output 3.1: Strengthened MOWRAM capacity	Number of MOWRAM and NCDDS Staff Trained - Number		200	600	Project MIS	Annual	PMU	Training sessions are attended by actual SCADA and M&E staff
	Strengthened MOWRAM Capacity (MOWRAM staff trained in river basin management, water accounting, SCADA system operation, and the design and implementation of climate-resilient green technologies)							
	staff trained - Males	0	75	150				
	staff trained - Females		50	100				
	total staff trained - Number	0	125	250	Project MIS	Annual	PMU	
Output 3.2: NCDDS strengthened at national and provincial level	NCDDS strengthened at national and provincial level (NCDDS staff trained on project management, policy formulation and implementation and resource mobilization)							
	staff trained - Males	0	105	210				
	staff trained - Females	0	70	140				
	total staff trained - Number	0	175	350				

Integrated project risk matrix

Overall Summary Risk Category / Subcategory	Inherent risk	Residual risk
Country Context	Moderate	Moderate
<i>Political Commitment</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Macroeconomic</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Governance</i>	<i>Moderate</i>	<i>Low</i>
<i>Fragility and Security</i>	<i>Low</i>	<i>Low</i>
Sector Strategies and Policies	Moderate	Moderate
<i>Policy alignment</i>	<i>Low</i>	<i>Low</i>
<i>Policy Development and Implementation</i>	<i>Moderate</i>	<i>Moderate</i>
Environment and Climate Context	High	High
<i>Project vulnerability to environmental conditions</i>	<i>High</i>	<i>High</i>
<i>Project vulnerability to climate change impacts</i>	<i>Substantial</i>	<i>Substantial</i>
Project Scope	Moderate	Moderate
<i>Project Relevance</i>	<i>Low</i>	<i>Low</i>
<i>Technical Soundness</i>	<i>Moderate</i>	<i>Moderate</i>
Institutional Capacity for Implementation and Sustainability	Moderate	Moderate
<i>Implementation Arrangements</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Monitoring and Evaluation Arrangements</i>	<i>Moderate</i>	<i>Moderate</i>
Project Financial Management	Substantial	Substantial
<i>Project Organization and Staffing</i>	<i>Substantial</i>	<i>Substantial</i>
<i>Project Budgeting</i>	<i>Substantial</i>	<i>Moderate</i>
<i>Project Funds Flow/Disbursement Arrangements</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Project Internal Controls</i>	<i>Substantial</i>	<i>Substantial</i>
<i>Project Accounting and Financial Reporting</i>	<i>Substantial</i>	<i>Substantial</i>
<i>Project External Audit</i>	<i>Substantial</i>	<i>Substantial</i>
Project Procurement	Moderate	Moderate
<i>B.1 Assessment of Project Complexity</i>	<i>Moderate</i>	<i>Moderate</i>
<i>B.2 Assessment of Implementing Agency Capacity</i>	<i>Low</i>	<i>Low</i>
<i>Project Procurement Overall</i>	<i>Moderate</i>	<i>Moderate</i>
<i>A.1 Legal, Regulatory and Policy Framework</i>	<i>Moderate</i>	<i>Moderate</i>
<i>A.2 Institutional Framework and Management Capacity</i>	<i>Moderate</i>	<i>Moderate</i>
<i>A.4 Accountability, Integrity and Transparency of the Public Procurement System</i>	<i>Moderate</i>	<i>Moderate</i>
<i>A.3 Public Procurement Operations and Market Practices.</i>	<i>Low</i>	<i>Low</i>
Environment, Social and Climate Impact	High	High

Overall Summary Risk Category / Subcategory	Inherent risk	Residual risk
<i>Biodiversity Conservation</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Resource Efficiency and Pollution Prevention</i>	<i>High</i>	<i>High</i>
<i>Cultural Heritage</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Indigenous People</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Labour and Working Conditions</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Community health, safety and security</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Physical and Economic Resettlement</i>	<i>High</i>	<i>High</i>
<i>Greenhouse Gas Emissions</i>	<i>Low</i>	<i>Low</i>
<i>Vulnerability of target populations and ecosystems to climate variability and hazards</i>	<i>Substantial</i>	<i>Substantial</i>
Stakeholders	Moderate	Moderate
<i>Stakeholder Engagement/Coordination</i>	<i>Moderate</i>	<i>Moderate</i>
<i>Stakeholder Grievances</i>	<i>Moderate</i>	<i>Moderate</i>
Overall	Substantial	Substantial