KINGDOM OF CAMBODIA

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MINISTRY OF WATER RESOURCES AND METEOROLOGY

CLIMATE ADAPTIVE IRRIGATION AND SUSTAINABLE AGRICULTURE FOR RESILIENCE PROJECT

Executive Summary

GENDER ACTION & SOCIAL INCLUSION PLAN

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Prepared by

the Ministry of Water Resources and Meteorology

1. Introduction

Cambodia's irrigated agriculture faces increasing challenges from adverse impacts of climate change, especially the changes in rainfall patterns, duration and timing of the rainy season, and climate induced water disasters such as floods and droughts. Climate Resilient and low emission practices and investments in agriculture and water management are, therefore, crucial to protect and enhance Cambodia's agricultural production and productivity, and contribute to increasing food security, poverty reduction, and livelihood development.

Addressing the complex impacts of climate change on rain fed and irrigated agriculture requires action at both farm and irrigation scheme, including enabling environment at regional and national level. Farm level actions will help communities adapt to climate change while also saving water and decreasing Green House Gas (GHG) emissions from Business-As-Usual (BAU) of agriculture, water use and management. This will help farmers diversify their farming while addressing changing rainfall patterns and increasing drought conditions throughout cropping season. Actions at system level will help develop a modernized and climate proofed irrigation infrastructure delivering irrigation services to farmers in line with the requirements at the farm level. It will also protect the natural capital stocks, especially the land and water, against the increasing risk of flooding.

The project aims to achieve the following three outcomes: (1) Improved Resiliency of Small Holder Farmers (2) Resilient Water Control Infrastructure and Water Service Delivery with Less Crop and Asset Damage; and (3) Reduced Greenhouse Gas emission. These three outcomes are derived from interventions at farm and irrigation system level - together with institutional strengthening for project stakeholders. This will contribute to improving an irrigated agricultural system that is climate resilient and sustainably productive.

The CAISAR project will target smallholder farmers and vulnerable rural communities in four provinces of Cambodia, including Pursat, Kampong Chhnang, Kampong Speu, and Kandal provinces. The Project will be implemented through various activities that are organized under the following three components:

- Component 1. Improving farm-level climate adaptation, resilience, and water use efficiency
- Component 2. Upgrading and climate-proofing water infrastructure for increased resilience
- Component 3. Institutional strengthening

The Project will be implemented by the Ministry of Water Resources and Meteorology (MoWRAM) - from 2025 to 2032. The estimated cost of the Project is US$240 million.

2. Gender assessment

A gender assessment has been conducted in accordance with GCF's Gender Policy. The assessment examines the livelihood activities of project's target, covering existing gender norms and how these norms affect people's daily livelihood activities. For livelihood/income generation activities, the assessment focuses on the main income source for majority of target farmers (rice), and other secondary income sources (cash crops, animal husbandry). To propose ways to address the gender gaps in adaptation capacity, the assessment examines the gender dynamics in rural livelihood activities (in the context of current climate change impact), and explore opportunities to strengthening women's capacities in adapting to the future climate change impacts – through project interventions, particularly through Gender Action and Social Inclusion Plan (GASIP). It is evident from the assessment that women's capacity in adapting and responding to climate-related stress and shocks is usually waker than that of men. This is

jeopardised by their pre-existing subordination in society –- reflected in their daily heavy workload in both domestic and farming responsibilities. Deeply rooted social structures and social norms that shape gender roles and dynamics in society and across all institutional sites (e.g., households, communities, policy) do amplify women's vulnerability to climate change impacts. The gender assessment found that women have limited access to climate-smart technologies, water, income diversification and value-chain development opportunities. Yet, given the primary role that women play in rural society, strengthening of their adaptive capacity is essential to contributing to the resilience of their households and communities. Inputs for the gender assessment were gathered from the poor, near-poor, ethnic minority groups, women, men, elderlies…who participated in 630 individual interviews, one hundred focus group discussions, and 18 community and governmental meetings in 2022 and 2023.

3. Key findings

Most income are generated from rice production, followed by animal husbandry, including chicken, cow, duck, and buffalo. Home-based fish farming and vegetable are rare: 1.7% (n=11) and 0.9% **(**n=6), respectively. Five key barriers are identified as current gender gap and potential constraint to promoting new technology adoption for improved adaptation. These include: 1) Traditional gender norms, 2) Burden of household chores, 3) Limited education and skills, 4) Lack of local wage jobs and increasing migration. Gender norms shape the gender division of labour in household chores, farming and income generation. Men generally take care of heavy works (physically heavy and poisonous) in farming and participate in social activities. Women bear the primary responsibility for child bearing and domestic works. Domestic work can be very time consuming. For instance, fetching water can take up to 3 hours a day.

In addition to their domestic role, women also participate in farming including home gardening, animal husbandry and rice production alongside men. Many women take care of rice during cropping season and participate in harvesting in case they do not have access to machinery . This is particularly the case for women headed households who face chronic lack of labour and more limited access to machinery and equipment. From project survey (n=630), Overall, it is estimated that male workers spend, on average, 59.4% of their time for farming vis-à-vis female counterpart who spend 40.5% of their time. However, most women participate jointly with their husband in decision making related to finance and play a dominant role (over their husband) when it comes to daily home expense and child care.

However, since rice is mainly considered to be a male crop, this can have negative implication to promoting sustainable adoption of new rice farming techniques for rice farming households for an estimated 40,000 hectare across six irrigation schemes in four project provinces. Indeed men typically dominate decision making in rice farming such as selection of rice variety, use of pesticide and fertilizers as well as on-farm irrigation management. For instance women tend to be under-represented in FWAC where key decisions on water management and irrigation use are made. This also means that extension activities targeting rice production are typically focused on male farmers.

Household survey (n=630) found that only 10% completed high school, 46% completed primary school, 22% finished secondary school, and the remainder drop-out, or never attend school. Sixty-five percent of income of surveyed household are from agriculture but in nearly of half of survey households (46%), women don't have a work skill that they can use to earn income − 43.4% of household members do not have income (jobless and retired). Waged jobs are rare in most project commune except in only some communes such as Veal Pong commune, Oudong district, Kampong Speu province where an estimated 60% of young women work fulltime as waged workers in nearby garment factories and migration are

increasing given increased garment industry development in Phnom Penh and neighboring provinces which offer regular waged job for young women from rural area.

4. Proposed interventions

The gender strategy of the project aims specifically at:

1) **Alleviating women's workload.** This will be done by a) **raising awareness** on the importance of sharing household chore and farming workload to give women more time to learn new skills (climate-smart farming technologies, irrigation system, financial management, business) that are essential for them to enhance they adaptation capacity.
2) **Promoting women's economic empowerment.** This will be done by enhancing women's access to skills and business development training that are centered around project target value chains for commodities such as rice, poultry, vegetable and fish that are appropriate to them. Women will be encouraged to participate in project trainings that help them address the potential impact of climate changes which include a) adoption of water-saving alternate wet and dry, b) adopt new seed varieties (which are more pest resistant and drought tolerant), c) adopt sustainable intensification packages that reduce seed rate, fertilizers and pesticide to save agricultural input costs and increase crop yield. Women are invited to take part in relevant trainings jointly with their husbands to support adoption of climate-smart technologies that also respond to their needs and preferences. In addition, project beneficiaries will be encouraged to diversity their existing sources of income, to improve the efficacy of existing income sources such as home-based gardening, animal husbandry (poultry and fish); promoting women's access to grant schemes as well as employment opportunities through value-chain development and PPP
3) **Strengthening women's role in decision-making both at the household and community level.** It is expected that the role of women in decision making at household level will be enhanced as the outcome from Item 1 and 2 above. At the household level, gender specific tools will be used to encourage joint decision-making in technology adoption and investment decisions. Women will participate in consultation activities and planning of irrigation infrastructures, value-chain development and early warning system . The project will also promote women's participation and leadership in FWUCs, which will be trained on how to enhance equitable access to water for women and other vulnerable groups.

5. Gender Action Plan and Inclusion Plan

The Gender Action and Social Inclusion Plan (GASIP) is aligned with the logical framework of the project. This aims to ensure the activities proposed in the GASIP are aligned with overall project design and promote gender mainstreaming in all possible investment areas. In addition, GASIP are proposed based on empirical evidence gathered from the project area, in-country and international experience in gender mainstreaming. Gender actions are proposed on the basis of a) analysis of gender gaps, b) constraints to gender mainstreaming, and b) opportunities to overcome such constraints. Key priority (for promoting gender mainstreaming) are identified for the project -- to pave the way for proposing various gender activities that are integrated into project investment. The table (next page) provides a summary of proposed actions that will be done to mainstream gender into project activities under three Project Components. This table is a living document will be updated in the first year of Project implementation to take into account the final project design, including proposed agricultural extension support (Component 1) and infrastructure investment (Component 2).

Project activities	Responsive Activities	Indicators	Base-line	Mid-line	End-line	Responsible institutions	Timeline	Notes
	Activity 1	**Percentage of female beneficiaries** • Of which Percentage of beneficiaries who are youth • Percentage of beneficiaries living below the poverty line. • Percentage of beneficiaries who are IP	**0** 0 0 0	**35%** 20% 10% 5%	**40%** 25% 10% 5%	PMU	Year 1	
	Activity 2	Number of gender and social inclusion training provided per year to relevant stakeholders: at least once per year per province	1	15		PMUs' social inclusion (gender, youth, IP)		
COMPONENT 1: IMPROVING FARM-LEVEL CLIMATE ADAPTATION, RESILIENCE AND WATER EFFICIENCY **OUTPUT:** • Climate resilient crop water management practices at farm level enabled • Climate resilient value added, and market led agriculture investment secured • Enabling conditions facilitated and capacities for climate resilient on farm water management and agriculture practices improved								
Sub-Component 1.1 Deployment of farm-level climate adaptation and water use efficiency measures								
Activity 1.1.1 Preparing community-based action plans for adapting to climate resilient crop-water management practices and their monitoring **Activity 1.1.2** Implementing climate-smart technologies in crop water management in line with the prepared action plans (LLL, DSR, AWD, SRI, IPM, straw management, and other none-rice crops **Activity 1.1.3** Supporting diversification from rice to non-rice crops **Activity 1.1.4** Critical farm infrastructures.	Women farmers from both couple and WHHs are actively involved in community-based action planning and decision-making over technology adoption and infrastructure.	❖ Average % female PARTICIPATING in each of the planning meetings ❖ Average % female ATTENDING each awareness raising activities on new technologies ❖ Average % female ATTENDING each training to adopt introduced technologies ❖ Average % female making decision over adoption of new technologies that are labour-saving and suitable to their production Average % female ADOPTING technologies that are labour-saving and suitable to their production, ❖ Average % HHs ADOPTING one new non-rice crop (diversification)	10%	20%	40%			

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Sub-Component 1.2 Climate adapted, value added, and market led agricultural investment								
Activity 1.2.1 Commodity selection with GoKC priorities as set in the Agricultural Development Plan **Activity 1.2.2** Public – Private – Producer – Partnership Facility (4PF) that crowd in, de-risk, and co-finance investment with MSMEs and farmers in support of climate-sensitive commodity development and rural employment generation **Activity 1.2.3** Leveraging of capital for investment to stimulate the financial sector to invest in climate change adaptation and value chain development activities in the project area	A participatory gender and social inclusion assessment of value-chains is carried out to identify opportunities for women and youth's participation in value-chain development and 4PF. 4PF arrangements are selected taking into account employment generation impact for women, men and vulnerable groups training women and youth in business skills development, processing etc.	❖ Percentage of women/youth having loan access ❖ Percentage of women/youth who are trained in financial literacy/ business skills development ❖ Percentage of women/youth who establishe agri-business/rural enterprises ❖ Percentage of women/youth accessing grant scheme ❖ Percentage of female-headed households participating in value chains supported under the project ❖ Percentage of women participating jointly with their husband in value chain supported under the project ❖ Percentage of women/youth gaining employment in VC development and 4PF						
Sub-Component 1.3 Improve enabling conditions, capacities and disaster risk management strategies								
Activity 1.3.1 support the establishment of agricultural centres of excellence in partnership with the private sector for the dissemination of improved sustainable agricultural techniques	Partnership is established with WDCs and other service providers for dissemination of sustainable intensification	❖ Number of MOAF staff trained on the use of gender tools and approaches						

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Activity 1.3.2 Building institutional capacity of MOAF for planning and extension of climate smart technologies in agriculture **Activity 1.3.3** Preparing water, climate information and agricultural early warning systems to assist farmers in agriculture planning	packages among rural women. MOAF Extension workers are trained on the use of gender tools and approaches (GALS?), also including attention to issues of joint decision-making and equitable workload							
Component 2: Upgrading and Climate-Proofing Water Infrastructure for Increased Resilience **OUTPUT:** • Flood proofing and functional drainage system operational • Irrigation System modernized with climate resilient technologies • Capacity of FWUC on water management increased								
Sub-Component 2.1 Modernization of irrigation scheme and ponds								
Increasing water availability and storage capacity for irrigation while decreasing the destructiveness of floods on downstream locations; and Implementing crop diversification and new activities to increase farming incomes such as fish farming or duck breeding **Activity 2.1.1** technical analysis, field survey and preparing plan for system upgrading	Technical analysis, implementation of infrastructure upgrading and preparation of O&M plans are carried out in consultation with women and youth.	❖ Average women/youth/ethnic minorities participating in consultation activities						

Project activities	Responsive Activities	Indicators	Base-line	Mid-line	End-line	Responsible institutions	Timeline	Notes
Activity 2.1.2 Implementation of infrastructure upgrading **Activity 2.1.3** Preparing canal O&M plans including application of ICT and SCADA for operation.								
Sub-Component 2.2 Flood-proofing and Drainage improvements								
Improving disaster prevention and protection of farmlands and assets by establishment of early warning systems and helping to improve capacities of the existing drainage networks and flood embankments. **Activity 2.2.1** Establish flood monitoring, information, and early warning systems **Activity 2.2.2** Strengthen and construction of flood control and drainage infrastructures. It will be implemented in an integrated manner with component 2.1 activities	Training on early warning system is delivered to women.	❖ Percentage women/youth/ethnic minorities participating in training on early warning system						
Sub-Component 2.3 Establishments and training of Farmers Water User Communities								
Activity 2.3.1 Formation of institutional strengthening of the FWUC **Activity 2.3.2** Build technical capacities of FWCU for canal O&M **Activity 2.3.2** Prepare long term financing plan for WUS	FWCU develop gender and social inclusion plans, to promote the user rights of women and vulnerable groups and support women's participation and	❖ Percentage of FWUC developing gender and social inclusion plans ❖ Percentage FWUC with women in leadership position. ❖ Women/youth trained in O&M						

Project activities	Responsive Activities	Indicators	Base-line	Mid-line	End-line	Responsible institutions	Timeline	Notes
and support its implementation.	leadership in water governance Training of women/youth/vulnerable groups in O&M	❖ Women/youth participating in O&M						
Component 3: Institutional strengthening **OUTPUT** • Improved capacity of MoWRAM, NDA and stakeholder, and enhanced project sustainability • Enhanced project sustainability								
Sub-Component 3.1 Capacity Support for MOWRAM								
Activity 3.1.1 Preparation of climate resilient design manuals for irrigation and train staff **Activity 3.1.2** Building capacities on application of ICT and RS technologies, data management **Activity 3.1.3** capacity building in water Accounting and Auditing	Train MOWRAM staff on gender and social inclusion	❖ Number of climate resilient design manuals for irrigation with attention to gender and social inclusion ❖ Number of training on gender and social inclusion delivered to MOWRAM staff						
Sub-Component 3.2 Strengthening of NDA and NCDD								
Activity 3.2.1 Strengthening the national climate policies and Strategic plans: Initiate the development and promote the implementation of legal instruments, policy, strategic plans, and action plans for climate change rapid response, develop	Promote the participation of women's organizations in policy dialogue activities and GHG mitigation strategies.	❖ Number of policy consultations with women's organizations ❖ Knowledge products on gender developed for evidence-based policy dialogue						

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sustainable GHG mitigation strategies **Activity 3.2.2** Enabling national M&E systems for monitoring and evaluating national climate actions **Activity 3.3.3** Build capacity of the MOE (NDA), NCDD and other relevant stakeholders to design and manage the climate financing projects.								