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Cambodia

Promoting Climate Resilient Water Management and Agricultural Practices in Rural Cambodia (NAPA Follow-Up)

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Implementing Partners/Responsible parties: Ministry of Agriculture, Forestry and Fisheries (MAFF) Project Support Unit (PSU)

Country Programme Outcome: National and local authorities are better able to conserve biodiversity and respond to climate change.

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Acronyms

ALM	Adaptation Learning Mechanism
AWPB	Annual Work Plan and Budget
CARDI	Cambodian Agriculture Research Development Institute
CC	Climate Change
CIP	Commune Investment Program
CPAP	Country Program Action Plan
D&D	Decentralization and De-concentration
IFAD	International Fund for Agriculture Development
FFS	Farmer Field School
FFD	Farmer Field Day
FWUCs	Farmer Water User Communities
GEF	Global Environment Facility
LDCF	Least Developed Country Fund
MAFF	Ministry of Agriculture, Forestry and Fishery
MOWRAM	Ministry of Water Resource and Meteorology
NAPA	National Adaptation Programme of Actions to Climate Change
NAPA FU	Promote Climate Resilient Water Management and Agriculture Practice in Rural Cambodia, in short called NAPA Follow Up.
NGO	Non Government Organization
NCDD	National Committee for Democratic Development
PDA	Provincial Department of Agriculture
PDOWRAM	Provincial Department of Water Resource and Meteorology
PDOWA	Provincial Department of Women Affairs
POC	Program Operation Cost
PSU	MAFF Project Support Unit
RULIP	Rural Livelihood Improvement Project
SGP	Small Grants Programme
SRI	System of Rice Intensification
SCW	Save Cambodia Wildlife
TSU	Technical Support Unit
UNDP	United Nation Development Programme
VRA	Vulnerability Reduction Assessment

I. Executive summary

Built on the successful trials since 2010, the farmers in the target communes of Kratie and Preah Vihear actively participated in testing improved rice varieties. Farmers in 11 villages increased their understanding about rice trial and are happy with the results of rice trials conducted in collaboration with Cambodian Agriculture Research and Development Institute (CARDI). Based on farmers' request, the project continued supporting Provincial Departments of Agriculture (PDAs) in conducting more trials on six rice varieties¹ to assess their performance under drought and sub-mergence conditions. In general, the introduced rice varieties performed better than the farmers'. The yield was about 25-30% higher. However, the experiment of submergent resilient rice varieties in Kratie had been heavily affected by long period flood. It appears that more farmers in the same villages demand and willing to test the varieties in 2012.

In addition, with support from CARDI, 92 target beneficiaries of 4 communes actively participated and showed enthusiasm on seed purification program, which is facilitated by the Provincial Department of Agriculture (PDA) to ensure the quality of rice seeds with higher yield. In response to the increasing farmer demand on rice seeds, the project will expand the seed program from 4 communes in 2011 to 11 communes in 2012 in the two target districts and continue to strengthen the existing groups of smallholder farmer seed in 2012.

Farmers in target communes also benefited from Climate Change (CC) resilient farming practices and crop varieties through a 20-week farmer field school (FFS). The FFS focused on teaching farmers an Integrated Farming System (IFS), which included theory and demonstration on system of rice intensification (SRI), vegetable gardening, chicken and pig raising and composting. FFS is aimed at improving the CC adaptive capacity of farmers and rural people livelihood through agricultural diversification. In response to the problem of drought and shortage of water for domestic use, the project introduced also the pumping wells. 6 villages, where farmer learning provided, it is noted that farmers began to change the behaviour from unwilling to adopt in 2010 to practice new initiative in 2011. More farmers from 14 villages are expected to undertake

From the project year 2, the project staff and government counterparts from collaborating ministries and line departments gained more understanding on the relevance of climate change adaptation in agriculture and water, and Gender and Climate Change through various fora such as project workshops, local and international exchange visits, and specific training provided in collaboration with the Climate Change Department of Ministry of Environment, and the Save Cambodia Wildlife (SCW). It is also acknowledged that the project staffs at the national and sub-national level are aware of the impact and have a better knowledge and basic skills on climate change adaptation in agriculture and water resources. The awareness and knowledge spread over by government counterparts beyond the NAPA FU to RULIP target areas through awareness raising campaigns and follow-up trainings. It is expected that more farmers in RULIP project sites will change their farming practices to be more resilient in climate change in 2012.

To improve water accessibility for irrigation during dry spell and dry season, the Irrigation Specialist has been supporting the Provincial Department of Water Resources and Meteorology (PDOWRAM) in feasibility

¹ The six varieties tried in the target areas are also among the ten rice varieties endorsed by government in promoting the new Paddy Production and Rice Export Policy launched in August 2010.

and topography studies. The study report with inclusion of Community Adaptation Measures on water management and irrigation design has been made available. A resilient irrigation design and tender document for two pilot sites were made ready for bidding process in late 2011 and rehabilitation work will start in early 2012. The first ever resilient irrigation curriculum developed and trained to 26 government staff at provincial and national levels who are concerned with irrigation planning and implementation. The curriculum focus on how to build institutional, technical and capital resilience for climate proof irrigation. The 24 participants became training of trainers and will use the training curriculum to train commune councillors and FWUC members in 2012.

This year, MoWA has joined the project board as a member. Beyond its mandate of gender mainstreaming, MoWA has been taking a leading role in developing a Gender and Climate Change training manual and ensuring the implementation of the gender-related activities in the Gender Action Plan (GAP). MoWA used training manual to train 49 provincial government counterparts in two training workshops. In 2012 PDoWA will assume bigger roles in providing training to beneficiaries in 76 communes on gender and climate change.

Last but not least, in an attempt to have lessons learned replicated and up-scaled to other parts of the country, MAFF/PSU in collaboration with relevant ministries and UNDP conducted a national knowledge sharing workshop on climate change adaptation in agriculture and water by bringing more than 140 participants representing planners, decision makers and practitioners from the national and sub-national levels. The presentations and discussion in the workshop allow participants to understanding challenges and opportunities of integrating climate resilient agriculture and water resource management into policy, planning and implementation and support the effort in building synergy to achieve greater project outcomes. There were 3 newspaper pieces, 5 online articles, 3 radio clips and 2 TV reports were published well cover the issues of the workshop on climate change adaptation in agriculture and water resources.

In conclusion, project has accomplished a remarkable result and shown confidence to expand from 4 to 11 communes in the target districts. However, the project faced a number of challenges during the second year of implementation. The delay of the international consultant's recruitment, procurement, late delivery of the contracted NGO and PDoWRAM, staff turn-over -project staff at sub-national level and Provincial Coordinator, late implementation of the POC and the change of the sub-national structure. Furthermore, two others events had impeded on the project delivery: field work was also interrupted for a number of days as the border conflict between Cambodia and Thailand erupted in Preah Vihear and long period flood in Cambodia as well as in the region. As consequence of these a close monitoring is required and a boosting approach set up to speed up the implementation. As a result, by the end of 2011, the project could deliver 94.28% of total approved budget.

II. Implementation progress

PROGRESS TOWARDS PROJECT OUTPUTS

OUTPUT 1.1: Commune Council Plans and budgets address inherent climate risks in target districts			
Output Indicators	<i>Baseline (September 2009)</i>	<i>Target (August 2013)</i>	<i>Current status (December 2011)</i>
Number of commune development plans with	Climate Risk Management is	By the end of the project, 16	Climate risk reduction activities and adaptation measures on

climate risk safeguards and anticipatory risk reduction activities.	absent from commune development plans.	commune development plans incorporate climate risk management and adaptation measures.	agriculture and water resources, identified from VRA and RGA, have been integrated into CIP 2012 of the 16 target communes.
Provincial Development plans with explicit CC adaptation measures.	Provincial development plans do not include explicit CC adaptation measures.	By the end of the project, provincial development plans in the target provinces incorporate explicit measures to address CC risks.	A 5-year provincial development plans-PDP and a 3-year provincial and district investment program (2011-2014) in the two target provinces incorporated climate change adaptation measures to address climate change risks.
Cumulative expenditure:		USD 45,012.58	
- Key findings on problem-cause-solutions of vulnerability reduction and rapid gender assessments were prepared and used as references for discussion with commune councils and its planning and budgeting committee (PBC) members from 16 communes in both target districts of KRT and PVH provinces. The exercises were aiming at influencing and integrating climate risk reduction solutions into 2012 CIP formulation. 39 (7 women) provincial and district technical support team of RULIP and NAPA FU received TOT training on Climate Change Adaptation (CCA). Then, the follow-up trainings on CCA were conducted for 268 farmer groups (project beneficiaries from NAPA FU and RULIP) from 202 villages, 54 communes in 10 districts in PVH and KRT provinces. Totally, 6,469 (3,122 women) gained better understanding the cause of climate change, the impact of climate change on agriculture and water resources and the adaptation measures (activities) to address the risk of climate change.			
☒ delivery exceeds plan	☐ delivery in line with plan	☐ delivery below plan	
OUTPUT 1.2: Conflict Potential in areas in areas prone to climate-induced water assessed and conflict prevention measures supported.			
Output Indicators	Baseline (September 2009)	Target (August 2013)	Current status (December 2011)
Existence of meditative mechanisms to avoid or to manage conflicts resulting from access to water resources.	No conflict resolution mechanism exists to deal with conflicts related to water resources.	At the end of the second year of project, a meditative mechanism is available to avoid or manage conflicts resulting from access to water resources	Conflict resolution procedures have been specified in FWUC rules and regulation which will be recognized by the Ministry of Water Resource and Meteorology (MOWRAM). Two established Farmer Water User Communities (FWUCs) have been using the procedures as meditative mechanism to manage conflicts related to water uses.
Cumulative expenditure:		USD 8,654.63	

So far, step 1 to 3 of FWUC has been completed in the two target communes, in Kratie and Preah Vihear provinces. Step 4: the preparation and approval of FWUC rules and by-laws will be completed in quarter 1, 2012. The delay of this activity was due to long period flood and farmers were busy coping with the disaster.

Training materials on water-related conflict resolution prepared and two training of trainers (TOT) in Kratie and Preah Vihear were undertaken in quarter 4, 2011. *26 participants (9 women) from line departments and district offices were aware of Circular 01 on participatory irrigation management and development. They had better knowledge on approaches and steps in the establishment of FWUC and better understanding on early warning system and were able to facilitate the establishment of community-based early warning mechanism. Their skills on conflict resolution were improved and able to provide follow up trainings to their target groups.*

☐ delivery exceeds plan ☒ delivery in line with plan ☐ delivery below plan

OUTPUT 1.3: A community-based climate information system on flooding and drought events established

Output Indicators	Baseline (2009)	Target (2013)	Current status (December 2011)
Standardized communication structures for climate risk information are established.	No climate forecast and early warning information is communicated in target districts.	By the end of the first year of project implementation, standardized communication structures are in place to collect, analyze and relay climate and hazard warning information to vulnerable community members	Communication structures for climate risk information established. There were 34 volunteer agents (4 women) in 19 villages in Bosleav, Teuk Krahorm and Choam Khsan communes are in place. 26 (10 women) provincial and district project team of target provinces have better knowledge on related roles and operational functions of community-based early warning system through TOT training provided MAFF/PSU and MoWRAM.
Number of vulnerable households in pilot districts utilizing climate forecast information on seasonal or shorter timescales.	None of the households in the target areas use climate risk and early warning information to protect livelihood assets.	By the end of the project, 60% (50% women and 50% men) of households in pilot sites have access to timely early warning information about impending drought and flooding hazards.	Strategy for early warning information system was developed and launched in August 2011. Additionally, outcome roadmap and partnership building with regional, national and provincial levels has been realized. MAFF/PSU has signed a Memorandum of Agreement (MoA) with the Department of

			Meteorology (DOM) to generate better climatic information that can be timely disseminated and used by local communities enabling them to adapt to climate change variability. In 2011, 437 households (1,628 women) in Bosleav commune, Chit Borey district received early warning information on flood from PDoWRAM in collaboration with local authorities and relevant stakeholders.
Cumulative expenditure:			USD 6,442.24
The gaps and needs on early warning information system were discussed and identified in consultation with relevant stakeholders (Oxfam UK, Cambodia Red Cross, Sub-national Disaster Management Committees, PDA, PDoWRAM and commune councils). The project was requested to further strengthen the existing EWS mechanisms. Information needs for women and men have been further identified through rapid gender assessment and implemented through the GAP. Upon completion of the ToT in quarter four in 2011, the project team, at provincial and district level , have better knowledge and are able to provide follow-up training to the target groups on community-based early warning system, climatic hazard and potential risks. The follow-up training on the above subject is planned in quarter 1, 2012.			
☐ delivery <i>exceeds</i> plan	☒ delivery <i>in line with</i> plan		☐ delivery <i>below</i> plan

OUTPUT 2.1: Improved access to water for household use and agriculture demonstrated in 11 target villages			
Output Indicators	<i>Baseline (2009)</i>	<i>Target (2013)</i>	<i>Current status (December 2011)</i>
 Number of households harvesting and/or conserving rain water in target villages for household	155 hhs out of 7,976 hhs in Choam Khsan and 447 hhs out of 11,501 hhs in Chit Borey districts are harvesting rainwater for household use	By the end of the project, at least 30% of all households in the target districts are actively harvesting rainwater to conserve and safeguard water resources for household use.	735 vulnerable families in Bosleav and Teuk Krahorm communes received 735 water purifiers and access to safe drinking water for home consumption in drought and flood seasons. 314 households of 15 villages in 5 communes of Choam Khsan district have accessed to clean water for household uses from 32 drilled wells constructed by the project. So far, 12 farmer

			user groups formed to ensure the effective management and use of water. Two irrigation ponds in Teuk Krahorm communes dug to supply water for animal, home garden and irrigate rice crops during prolong dry-spell. Three solar pumps are under construction and expected to be completed in quarter 1, 2012. These water schemes will supply water for domestic and cropping in 3 villages. It is estimated that around 300 households will benefit from the schemes.
 Land hectare under irrigation during dry spells	1,486 hectares for irrigation in Bosleav commune, 0 hectare in Teuk Krahom commune.	By the end of the project, hectare are under irrigation during the dry season should increase by 30%.	Two irrigation systems identified and feasibility studies have been completed. The study report and tender document for the two schemes were completed and the bidding process will be done in quarter 1, 2012.
Cumulative expenditure:		USD 170,978.99	
To improve coordination and synergy with MoWRAM, the project team met an Under Secretary of State of MoWRAM to inform him about NAPA FU project, the progress in particularly on water resources management and discuss the possibility of cooperation and coordination between MAFF and MOWRAM in the context of NAPA FU project. MoWRAM praised the institutional arrangements enabling a networking and favourable working relations at national and sub-national levels between MoWRAM and MAFF. Target sites and numbers of households for rain water harvesting, community wells, ponds and solar pumps were properly consulted and identified by the project team and commune/village chiefs. The Procurement committees were set up to facilitate the procurement process for rain water harvesting tanks, well-digging, solar pumps, community ponds and irrigation scheme have been established in the two target provinces.			
☐ delivery exceeds plan	☒ delivery in line with plan		☐ delivery below plan

OUTPUT 2.2: Resilient farming methods to climate-induced changes in rainfall intensity and distribution demonstrated

Output Indicators	Baseline	Target	Current status
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	(2009)	(2013)	(December 2011)
■ Number of women who have benefited from climate resilient farming practices and crop varieties.	No climate resilient farming practices and crop varieties are available.	At least 30% of the women have adopted climate resilient farming practices and crops by the end of the project.	1,627 households representing 8.5% in target districts benefited from climate resilient farming practices and crop varieties. An adoption rate will be assessed in quarter 4, 2012. Resilient farming practices and crop varieties that has been carried out include: integrated farming system, SRI, seed purification, bull raising, bio-gas and composting, fish, pig and chicken raising and vegetable gardening aiming at diversified cropping and generating income.
■ Number of agricultural practices evaluated for their performance and resilience under different climatic scenarios.	Agricultural techniques and prescriptions are not systematically analyzed for climate resilience and cost/benefit under different climatic scenarios.	By the end of the project, at least 3 agricultural farming methods (including SRI) are evaluated for their performance and resilience under different climatic scenarios.	72 sets of OFAT on resilient rice crops (for submergence and drought tolerance of rice varieties) were carried out in 11 villages in target districts. In response to farmers' needs, the project implemented also seed purification and selection programme in 5 target villages to help farmers to access climate resilient crops. In addition, farmers carried out also OFAT on resilient mung bean and tomato in 8 target villages.
Cumulative expenditure:	USD 71,074.37		
• In collaboration with CARDI, 92 farmers (65 women) have been selected and trained on rice seed purification. 72 households have been selected to carry out On-Farm Adaptive Trials (OFAT). Those include: 15 OFATs for drought, 15 OFAT's for submergence tolerance of rice varieties, 12 demos on rice seed purifications, 20 demos on mung bean varieties and 10 demos on tomato varieties tolerance to heat. These experiments are carried out in 10 villages (5 villages in Preah Vihear and 5 villages in Kratie). • Two farmer rice seed production groups (Senpidor and Phkar Romdoul) were formed in Bos Leav Leu village, Bosleav commune, Kamboar and Samret villages in Kouk Loab commune, consisting of 50 members (20 females). 125Kg foundation seeds were distributed to group members. • 42 households in Toeuk Krahorm commune have been supported for fish raising in plastic. The support includes training, fingerlings and materials. • 115 farmers (54 women) participated actively in FFS. Among which 12 households carried out demonstration on SRI, vegetable gardening, pig and chicken raising. • In an effort to reduce the risk of animal diseases, the Department of Agriculture (PDA) conducted awareness campaigns on vaccination, collected animal statistics and carried out vaccination campaign			

(food and mouth diseases and haemorrhagic septicaemia) for 1,653 heads of animal of 381 households in 14 target villages. 7 Village Animal Health Workers (VAHWs) have better knowledge and are able to provide basic animal health services to farmers after receiving training from the project.		
☐ delivery <i>exceeds</i> plan	☒ delivery <i>in line with</i> plan	☐ delivery <i>below</i> plan

OUTPUT 2.3: Resilient design and management of reservoirs, irrigation canals, ponds and dykes promoted and demonstrated			
Output Indicators	<i>Baseline (2009)</i>	<i>Target (2013)</i>	<i>Current status (December 2011)</i>
Availability of guidelines for climate resilient irrigation design in Cambodia.	No user-friendly guidelines on climate resilient irrigation design are available in Cambodia.	By the end of the first year of project implementation, guidelines are available for climate resilient irrigation design.	An Irrigation Specialist has been recruited to draft a climate resilient irrigation guideline. Technical report and the draft community adaptation measures on water management were finalized.
Number of Farmer Water User Committees (FWUCs) able to operate and maintain climate resilient irrigation systems.	FWUCs are not able to systematically operate and maintain CC resilient irrigation system.	By the end of the project, 70% of FWUC, Technical Support Unit (TSU) and PDoWRAM engineers in the pilot districts are able to routinely maintain and operate CC resilient irrigation systems.	Project team who participated in FWUC training have better knowledge and able to provide capacity building support to FWUC and farmer water user groups after receiving ToT training on FWUC in October 2011.
Number of reservoirs, irrigation canals ponds and dykes re-designed accommodate longer dry periods and/or increased rainfall intensities.	No modification of irrigation systems that actively incorporates changing climatic trends and projections.	By the end of the project, modifications have been made to at least 2 reservoirs, 4 irrigation canals and 4 communal ponds in both target districts ("major" to be determined based on baseline survey; e.g. increase in reservoir capacity from a 20-year event to a 50-year event)"	Two pilot irrigation schemes selected. Modification work of irrigation system designs and cost estimation completed. Tender document of three packages of two selected irrigation schemes were prepared and procurement process is in progress. A two kilometer dyke in Bos Leav is under rehabilitation and will be completed in quarter 1, 2012.
Cumulative expenditure:	USD 28,362.01		

MoWRAM has now a better understanding of the NAPA FU project activities. The suggestion of having NAPA activities complement the MoWRAM dam rehabilitation project in Teuk Krahorm, Choam Khsan district won acceptance of the MoWRAM management level.

The training manual on climate resilient irrigation and water resource management was developed. The project team has better knowledge and skills on resilient irrigation through training provided by the Irrigation Specialist in October 2011; it provided follow-up trainings on resilient irrigation to the FWUC and target beneficiaries.

☐ delivery *exceeds* plan

☒ delivery *in line with* plan

☐ delivery *below* plan

OUTPUT 3.1: Increased public awareness and environmental education programmes on climate risk reduction designed and implemented

Output Indicators	Baseline (September/2009)	Target (2013)	Current status (December 2011)
Percentage of households in pilot sites aware of precautionary measures to counter CC risks and minimize material losses.	Virtually no households in pilot districts are aware of long-term climatic trends and projections that affect their farming outputs and livelihood security.	By the end of the project, at least 70% of households in the target communes are aware of long-term climatic trends that potentially affect their livelihood security, and of potential small-scale adaptive measures to safeguard livelihoods	This component has been sub-contracted to a local NGO, Save Cambodia Wildlife (SCW) who had produced a baseline study of people's knowledge, attitude, and practice towards CC in the two target communes. Based on them, awareness raising strategy and training materials are being finalized and applied from early quarter 3, 2011. SCW and project team took the opportunity of the World Environment Day to test the finalized campaign strategy by organizing CC knowledge sharing sessions with 1000 farmers from both the target districts. Posters distribution and comedy were two of the main tools to vehicle the CC messages.
Number of paper-based, web-based, audio-based and TV-based publications about project-related practices, approaches, methods or results.	No project-related publications	From year 2 of project implementation onwards, at least 5 TV and radio broadcasts per year At least (10) paper-	In 2011 the project produced several information and communication materials in print, online, audio and visual formats and shared among relevant partners in climate change arena and the media. A project factsheet, a photo album, and the

		based and web-based publications in the lifetime of the project.	Vulnerability Reduction Assessment (VRA) report were print, shared and uploaded on UNDP websites and ALM. Furthermore, three result-based feature stories were made and published in UNDP newsletters and website. In the project's main events such as the World Environment Day and the National Learning Workshop, it attracted news coverage from online, radio and TV outlets. There were 3 newspaper pieces, 6 online articles, 3 radio clips and 4 TV reports were published about the two events. Moreover, the project was also featured and its national advisor was interviewed by the national channel, TVK and the most popular one, CTN.
 Number of workshops at the national and regional levels on lessons learned.	None	At least 1 national workshop per year During the lifetime of the project, at least 1 regional workshop.	More than 100 participants (35% women) of UN-Habitats and UNDP/SGP workshop, gained better understanding and knowledge of climate change from the NAPA FU project team. Regional participants from 5 LDCs including Cambodia learnt from each other and able to provide inputs in producing Climate Change Adaptation module on Agriculture and Water Resources.
Cumulative expenditure:	USD 34,755.26		
Awareness raising materials on climate change including gender and climate change have been developed. CC awareness assessment methodology and tools drafted, consulted and pre-tested. Awareness raising strategy was developed and will be launched in quarter 1, 2012. A learning session on how to take, to frame and to document photos of project activities for reporting and case study purposes was provided to 10 provincial team members in Kratie. The project added a presentation skill to the ToT on CC for RULIP's technical support team in Preah Vihear. The purpose was to equip them with an ability to deliver CC messages well when they conduct trainings to			

farmers.

The English and Khmer versions of the VRA report have been shared with the project team and counterparts. Furthermore, they along with CC posters were distributed to stakeholders of RULIP funded project, RPRP, through their completion workshop in September. In addition, they were shared and distributed also to participants of the second national CC forum in quarter 4.

The project team shared knowledge and experiences on how to mainstream climate change in local planning process with 100 participants from UNDP/SGP and CCBAP grantees.

☐ delivery exceeds plan

☒ delivery in line with plan

☐ delivery below plan

OUTPUT 3.2: Learning networks for climate-resilient farming practices established

CCAF 01.5.2: Learning networks for climate resilient farming practices established			
Output Indicators	Baseline (September 2009)	Target (August/2013)	Current status (December 2011)
■ Number of women receiving extension services on CC resilient farming techniques has increased.	According to MAFF, only .01% of rural women receive extension services.	By the end of the project, 30% of farmers (50% is women) in the target areas incorporate lessons learned from the project in their practical livelihood activities.	341 women from six villages (representing 11.7%) have better knowledge on resilient farming practices through farmer field school and farmer field days and training on seed purification techniques.
■ Project-related lessons learned are communicated through Adaptation Learning Mechanism (ALM) and CC Solution Exchange	No lessons learned are available	By the end of the project, the ALM and Solution Exchange include lessons learned from this project and makes these lessons accessible to other countries in Asia and beyond	Section of NAPA FU project has been set-up in ALM web-site; and project factsheet and photo album have been uploaded. Posters of CC training were posted on ALM under the "training material category". The final versions of VRA and RGA have been uploaded to the ALM. There is also a video of farmers' benefits from the project's water filters.
Cumulative expenditure:	USD 0.00		
Networking with other climate change projects in the country to create a communication network and share information and knowledge. The project team networked with communication focal people of the Cambodian Climate Change Alliance (CCCA) to set up mechanism for future cooperation.			
☐ delivery exceeds plan	☒ delivery in line with plan		☐ delivery below plan

OUTPUT 3.3: Review of national policies on CC adaptation based on lessons generated by the project			
Output Indicators	Baseline (2009)	Target (September/2013)	Current status (December 2011)
 Existence of draft modifications to relevant national policies on CC adaptation.	National policies and strategies for Agricultural Water Management do not contain reference to a changing climate.	By the end of the project, at least 1 sector policy in water and agriculture revised to includes climate risk considerations and reflect lessons learnt through the project	Experiences of NAPA FU project has been shared with the Technical Working Group on Agriculture and Water (TWGAW). There were 72 participants (18 women) including government institutions and relevant development partners such as FAO, AusAID, AFD, CDRI, EU, WinRock International in Cambodia etc.
Cumulative expenditure:	USD 42,162.38		
In an attempt to have lessons learned replicated and up-scaled to other parts of the country, MAFF/PSU in collaboration with the relevant ministries and development partners conducted a national knowledge sharing workshop by bringing 140 participants and practitioners from the national and sub-national levels to listen, to share and discuss experiences concerning climate change impacts and adaptation in Cambodia.			
☐ delivery exceeds plan	☒ delivery in line with plan		☐ delivery below plan

PROGRESS TOWARDS COUNTRY PROGRAMME (CPAP) OUTPUT

OUTPUT 2.3: A national strategy, programme, and financing mechanism established for cohesive climate change response at national, sub-national and community levels.			
Output Indicators	<i>Baseline (2010)</i>	<i>Target (2015)</i>	<i>Current status (December 2011)</i>
 No. of vulnerable communities in flood and drought prone areas that developed climate resilience	4	100	14 villages in two target communes.
 No. of climate-sensitive sectors with strengthened adaptive capacity.	0	4	2 climate-sensitive sectors: (1) Agriculture: inclusion of cc in FFS curriculum, promotion of resilient rice and crop varieties and farming practices, e.g. SRI, IFS. and (2) Water Resources: strengthen FWUC, demonstration of appropriate water improvement options and resilient irrigation system

			etc.
 No. of flood and/or drought prone communes applying climate resilient farming methods.	4	15	4 communes: two in each target province. Farming methods applied are on-farm-adaptive-trial (OFAT) for rice, mungbean and vegetable; Integrate farming system (IFS) and System of Rice Intensification (SRI), rearing fish in plastic, resistant bulls etc.
☐ delivery <i>exceeds</i> plan	☒ delivery <i>in line with</i> plan	☐ delivery <i>below</i> plan	

Capacity Development

Building the capacity of relevant government staff is one of the project's key strategies in strengthening Cambodia's institutions in climate change resilience. The relevant government staff involved in the project implementation has gained better understanding, hand-on experiences and shown confidence in dealing with climate change specifically in adaptation. These capacity building and learning processes were done through technical meetings, provincial, national and international workshops, training and on-the-job learning.

- Through the training on resilient irrigation system, the project team have better understanding and feel confident to provide follow-up trainings on the subject to FWUC and target beneficiaries.
- The Gender Climate Change workshop organized by UNDP regional in Bangkok offered an opportunity to the project team to take root deeper enabling a better articulation between Gender and climate change. Subsequently, the project team in collaboration with SCW and MoWA were able to develop a training manual on gender and climate change. This was then tested with provincial team in Kratie and Preah Vihear by MoWA gender and climate change working group.
- The Climate Change Adaptation workshop organized in Vietnam had been a useful forum allowing project team and relevant ministries to gain more knowledge, particularly on more options with regard to climate change adaptation experiences in the region.
- At the provincial level, the in-country exchange visits were undertaken for staff to see and learn from experiences of climate change adaptation activities being done in other parts of Cambodia, for example, a resilient irrigation in Kampot and an integrated farming system in Takeo provinces.
- Awareness-raising on climate change concepts and its impact on agriculture and water resources and climate change adaptation measures were widely discussed through sharing and learning session within the RULIP target communes and farmer groups.
- At the commune level, the project team also supported commune councils and its planning and budgeting committees (PBCs) defining and analysing climate change impacts and integrate appropriate adaptation measures in its planning.
- In collaboration with UNDP/GEF Small Grant Program, the project team was able to share the approach and experiences on climate change mainstreaming into local planning processes to UNDP/SGP and CCBAP grantees.

- Late this year, 24 project team members and partner ministries undertook a cross visit to Ang Giang province, Vietnam. They observed and learnt more how the government, private sector and farmers of Vietnam address and advance with climate change impacts.
- Last but not least, in an attempt to have lessons learned replicated and up-scaled to other parts of the country, MAFF/PSU in collaboration with relevant ministries and development partners conducted a national knowledge sharing workshop by bringing more than 140 participants and practitioners from the national and sub-national levels to listen, to share and discuss experiences concerning climate change impacts and adaptation in Cambodia.

Gender

In Cambodia women make up 51% of farmers and they directly contribute and impact on food security, national agricultural output, and play an important role in water management and environment. The impact of climate change has not only hindered development but it also affected men and women differently due to gender differences and inequalities. In 2011, the project addressed the issue and achieved a number of results:

- In collaboration with UNDP regional office, the project was assisted by a Gender Specialist from Energia in developing a gender mainstreaming action plan (GAP) built on the outputs from the Rapid Gender Analysis (RGA). The GAP with development of indicators was finalized in August 2011.
- Engendering the Strategic Results Framework: Taking the opportunity of the review of the SRF (requested by UNDP regional), the project had included the core activities of the GAP along with the indicators in the SRF. The proposed targets and indicators have been endorsed by the last Project Board in September 2011. From that date onwards, gender responsiveness will be systematically mainstreamed in the project cycle from planning to the Monitoring and evaluation. For example, in addressing the issue of drinking water, the project has included a target on “50% of women receive technical/leadership trainings on effective use of water”.
- A gender learning workshop organized by UNDP CO in November 2011 with participation of UNDP Regional and Energia, provided an important opportunity to facilitate exchange among all stakeholders and to discuss lessons learned and best practices under each Environment and Energy (E&E) funded projects. Furthermore, the workshop came up with the progress made on the implementation of the GAP within each project and action plan for the upcoming years.
- With support from SCW, MOWA Climate Change Working Group, the project team developed curriculum and training materials on gender and climate change. The tests were then undertaken in the two provinces.

However, a number of challenges need to be addressed:

- Limited capacity of the PDoWA and MoWA on Gender and Climate Change.
- Limited technical support (advisory services) to PDoWA and MoWA.
- Limited financing facilities in responding to activities included in the local planning process.
- Require a long term support from MoWA to sustain the current gender responsive approach.

Lesson Learned

Cross cutting issues and requires coordination efforts:

Climate Change has been recently introduced. Its nature of cross cutting issue requires and implies cross sector coordination. Consequently, synergy and partnership building are vital for bringing forward greater impact and also crucial in ensuring that there is no duplication on what has already been tried by others. The

project has aligned itself with other partners and initiatives engaged in supporting improved management of water resources in the agricultural sector in Cambodia. The project has developed strategic alliances with a number of partners including IFAD, Technical Working Group for Agriculture and Water (TWGAW), Cambodia Climate Change Alliance (CCCA), Climate Change Department of MoE, CARDI, SCW, UNDP/GEF Small Grants Programme etc, which the project has benefited from their expertise as well as to share experiences with them. The project also developed an outcome roadmap. It helps the project management in making sure the project outcomes are realized.

Implementation approach:

Two challenges emerged:

- Solutions identified and adopted (agriculture, irrigation and gender) might be interpreted more as coping mechanisms rather than adaptation measures.
- A risk subsists in considering the project activities from each line department as fragmented and with limited linkages.

But on the same occasion, the project has evident potential in turning the identified challenges into opportunities. In the practice at the field level, the three departments are working as one on most project activities; consequently, the project nurtures an embryo of "integrated and combined approach". There is a need of moving beyond the project's dimension towards a more programmatic and policy approach by systematizing the approach into an institutional approach in view of scaling up purpose.

III. Follow-up actions:

a. Board recommendations:

Recommendation 1: Lesson learns and other aspects for replication should be considered and need to be properly documented and disseminated.

Action taken:

- Technical meeting was conducted to collect, compile and document all project activities, methods and procedures currently used by the project team.
- With support from the National Communication Officer and provincial coordinators, the project team continues documenting and disseminating the project experiences.
- Knowledge and experiences from the national knowledge sharing workshop, organized by the NAPA FU project are documented.

Recommendation 2: The project team should continue to work closely with UNDP/GEF SGP team in order to promote integrated and combined approach to create greater results.

Action taken:

- The targets of UNDP/SGP projects are not overlapping with NAPA FU, the possibility of combined approach and linkage between the two projects might not be possible. However, NAPA FU and UNDP/SGP have been working very closely through exchanging CCA and VRA experiences in training and workshops.

- Additional linkage areas such as CC mainstreaming in commune development planning and commune investment program, promotion and replication of resilient rice varieties tested under the NAPA FU project in the SGP target areas.
- UNDP/SGP and the NAPA Follow-up team jointly conducted a reflection and learning workshop in quarter 4 to promote learning and synergy.

Recommendation 3: The team should consider using a holistic approach in training by using training of trainer methodology, and this could apply to the training of EWS. The option could be sending the project's team to a regional training programme.

Action taken:

Concept note for Partnership between NAPA FU project and Department of Meteorology (DoM) on Early Warning System was developed and Memorandum of Agreement was signed between the project manager and DOM. The objective of this cooperation is to provide additional capacity building support to DoM and PDoWRAM to generate better climatic information that can be timely disseminated and used by local communities enabling them to adapt to climate change variability.

Recommendation 4: To reach this year 100 % delivery, the project should consider any possible boosting approaches, but they need to balance between the current planned activities, budget, and timeframe.

Action taken:

- Discussed with UNDP the proposed boosting approach. Communicated these ideas with provincial team. Q4 work plan was developed by taking into account the proposed boosting strategies and budget, which was responding with the log frame.

b. Spot Check Recommendations:

Recommendations:

- Insufficient information and records of attractive items: The distribution list of USB modem, external hard drive, etc shall be maintained and reviewed regularly.
- Indirect payment to staff and contractors or suppliers: The payment should be made to individual staff/contractor directly. In addition, the project shall encourage staff/contractor to have a bank account and the payment shall be made by bank transfer.

Action taken: Done.

Recommendations:

- Insufficient document related to DSA payment: Advance shall be provided to those who have travel visa, mission order or appointment correspondence.

- Procurement of Civil Work – Biogas: A copy of design specification and work certification document shall be attached to the payment.
- Advance control sheet: shall be monitored regularly. Effort shall be made to ensure that the advance shall be liquidated with 15 days of activity completion. Advance shall be returned back if activity is not conducted within 3 months.
- Advance: advance request shall indicate tentative schedule. The maximum of advance is for 3 months. The advance shall be returned back if the activity is not carried out within the 3 months.
- Inadequate password protection: The password to login each computer shall be maintained and changed on a quarterly basis and should be set to expire every 3 months.
- No logging and monitoring to detect any unauthorized access to the Peachtree accounting system. NAPA-FU (ExCom) Kratie should ensure the unauthorized person to access the system.
- Backup and recovery procedures: provincial team should ensure integrity and completeness of the backup, recovery and restoration procedures for project data information for every 6 months basis, as it would lead to project operational inefficiencies and potential failures.

Action taken: Done

IV. Project implementation challenges

a. New Identified Risks and Issues:

New Risk 1: Different pace of project implementation

The current situation is that Kratie is running out of funds to implement the planned activities, while Preah Vihear still have considerable funds in the project account. The UNDP system requires that disbursement will be possible only if the project expenditures reach 80%.

Actions taken: *A closer follow-up from the national level and a closer monitoring from the project director at the provincial level need to be reinforced.*

b. Risks and actions

Project Risk 2:

The project supports the decentralisation and de-concentration (D&D) systems, which is currently being transferred into provincial administration. This change might have potential disruption in the implementation of project activities as it is not certain how the new structure will function.

The change from ExCom to the Provincial Administration is a threat if not solved at the earliest convenience. The new structure is officially in place, not all of them are yet operational. The process is more time consuming than the previous system (ExCom).

Actions taken:

The project was working in close collaboration with the National Committee for Democratic Development (NCDD) in charge of the decentralisation and de-concentration and would see their advice on how to proceed as the issue unfolds.

A letter from MAFF/PSU was sent to NCDD to seek the support of the Ministry of Interior in facilitating and speeding up the project delivery. On the same time, at the provincial level, despite a laborious start-up of the functioning new structures, a local solution was reached with the deputy governor in speeding up the project delivery.

At fourth project board meeting, MAFF/PSU will invite provincial governors to the meeting aiming at to find local solutions pending the full fledged launching of the new system and an operational structure and the successor of H.E Ky Sara in Kratie and H.E Suy Serith in Preah Vihear.

Project Risk 3:

The project is facing a challenge in mainstreaming CC into sub-national planning process on two main reasons: Firstly, MAFF is not the focal institution for decentralisation and de-concentration and so this is a new territory for the institution. Secondly, the NAPA Follow-Up project is only focused on CC in agriculture and water. However in order to bring a holistic approach to CC mainstreaming into sub-national planning process, the project would have to widen its scope to other sectors like CC and health; CC and gender and children; CC and NRM. Neither the project nor MAFF have a mandate or the expertise in these disciplines.

Actions Taken:

The project is piloting CC mainstreaming in alignment with the on-going sub-national planning procedures and systems developed by the Ministry of Interior and Ministry of Planning in a holistic manner.

As an outcome from the National Workshop MAFF/PSU will need to plan more institutional approaches with the concerned ministries: Planning with MoP, Financing with CCA /MoE and MEF and Functions with Mol. The Board might have a role to play for this institutional approach.

c. Updated project issues and actions

Project Issue 1: *Limited capacity of PDoWRAM in Preah Vihear as a result of staff turn-over*

Actions taken:

The provincial parties will inform the national parties including the MoWRAM on the progress in performing the activities as indicated in the annual plan. The performance of PDoWRAM will be closely monitored by the Deputy Governor, MAFF/PSU and MoWRAM.

One additional contract staff for each province is proposed to 4th project board meeting for approval.

Project Issue 2:

Procurement at the National and Sub-National level is slowed. The process needs to be rationalized.

Actions taken:

At the sub national level, it was agreed to perform a procurement campaign which will occur at the provincial level, with participation of national level in accordance with the NCDD regulations.

MAFF/PSU sent a letter to delegate the procurement responsibility to provincial procurement committee. The issue is now solved.

IV. Financial status and utilization

Table 1: Contribution overview [start date of the project – end date of project] [01/07/2009 - 30/06/2013]

DONOR NAME	CONTRIBUTIONS		CONTRIBUTION BALANCE
	Committed	Received	
UNDP	\$ 1,240,350.00	\$ 251,143.44	\$ 989,206.56
GEF	\$ 1,850,000.00	\$ 1,271,866.80	\$ 578,133.20
TOTAL	\$ 3,090,350.00	1,523,010.24	\$ 1,567,339.76

Table 2: Quarterly expenditure by project output or Activity (in Atlas format) [01/09/2011 – 31/12/2011]

ACTIVITY	BUDGET PLAN [Q4]	EXPENDITURE [Q4]	BALANCE	DELIVERY (%)
Activity 1: Commune plans & budget address inherent climate risks in target districts	21,807.00	45,012.58	(23,205.58)	206.41%
Activity 2: Establishment of conflict prevention measures	10,212.00	8,654.63	1,557.37	84.75%
Activity 3: A community based climate information system on flooding and droughts	15,748.00	6,442.24	9,305.76	40.91%
Activity 4: Improved access to water for household and agricultural use demonstrated in 11 target villages	275,101.00	170,978.99	104,122.01	62.15%
Activity 5: Resilient farming methods to climate induced changes in rainfall intensity and distribution demonstrated	90,176.00	71,074.37	19,101.63	78.82%
Activity 6: Resilient design and management of irrigation systems promoted and demonstrated	37,165.00	28,362.01	8,802.99	76.31%

Activity 7: Public awareness and environmental education programmes on climate risk reduction designed and implementation	44,720.00	34,755.26	9,964.74	77.72%
Activity 8: Learning networks for climate resilient farming practices established	3,100.00	-	3,100.00	0.00%
Activity 9: Review of national policy on climate change adaptation based on lessons generated by the project	64,924.00	42,162.38	22,761.62	64.94%
Activity 10: Programme Support Services(Country office)	84,393.00	54,950.45	29,442.55	65.11%
UNDP GMS (based on donor agreements)				
TOTAL	647,346.00	462,392.91	184,953.09	71.43%

Remarks: The request for 4th quarter NEX Advance was released only \$350,000 in November to Implementing Partner as the project is reaching the year end closure.

Table 3: Annual expenditure by project output or Activity (in Atlas format) [1/01/2011 – 31/12/2011]

ACTIVITY	BUDGET PLAN 2011	CUMULATIVE EXPENDITURE 2011	BALANCE	DELIVERY (%)
Activity 1: Commune plans & budget address inherent climate risks in target districts	200,000.00	164,456.03	35,543.97	82.23%
Activity 2: Establishment of conflict prevention measures	14,316.00	11,534.14	2,781.86	80.57%
Activity 3: A community based climate information system on flooding and droughts	24,240.00	16,487.54	7,752.46	68.02%
Activity 4: Improved access to water for household and agricultural use demonstrated in 11 target villages	109,860.00	202,575.03	(92,715.03)	184.39%

Activity 5: Resilient farming methods to climate induced changes in rainfall intensity and distribution demonstrated	144,761.00	204,038.80	(59,277.80)	140.95%
Activity 6: Resilient design and management of irrigation systems promoted and demonstrated	155,200.00	42,887.70	112,312.30	27.63%
Activity 7: Public awareness and environmental education programmes on climate risk reduction designed and implementation	148,548.00	142,444.76	6,103.24	95.89%
Activity 8: Learning networks for climate resilient farming practices established	5,860.00	-	5,860.00	0.00%
Activity 9: Review of national policy on climate change adaptation based on lessons generated by the project	123,535.00	143,782.31	(20,247.31)	116.39%
Activity 10: Programme Support Services(Country office)	221,350.00	153,854.64	67,495.36	69.51%
UNDP GMS (based on donor agreements)				
TOTAL	1,147,670.00	1,082,060.95	65,609.05	94.28%

Table 4: Cumulative expenditure by project output or Activity (in Atlas format) [1/07/2009 – 31/12/2011]

ACTIVITY	TOTAL BUDGET	CUMULATIVE EXPENDITURE	BALANCE	DELIVERY (%)
Activity 1: Commune plans & budget address inherent climate risks in target districts	1,120,350.00	230,838.10	889,511.90	20.60%
Activity 2: Establishment of conflict prevention measures	200,466.00	187,542.48	12,923.52	93.55%

Activity 3: A community based climate information system on flooding and droughts	22,920.00	32,725.19	(9,805.19)	142.78%
Activity 4: Improved access to water for household and agricultural use demonstrated in 11 target villages	235,684.00	245,676.44	(9,992.44)	104.24%
Activity 5: Resilient farming methods to climate induced changes in rainfall intensity and distribution demonstrated	294,347.00	224,687.16	69,659.84	76.33%
Activity 6: Resilient design and management of irrigation systems promoted and demonstrated	534,251.00	52,554.14	481,696.86	9.84%
Activity 7: Public awareness and environmental education programmes on climate risk reduction designed and implementation	231,000.00	143,328.76	87,671.24	62.05%
Activity 8: Learning networks for climate resilient farming practices established	110,000.00	253.00	109,747.00	0.23%
Activity 9: Review of national policy on climate change adaptation based on lessons generated by the project	221,332.00	185,941.28	35,390.72	84.01%
Activity 10: Programme Support Services(Country office)	120,000.00	153,854.64	(33,854.64)	128.21%
UNDP GMS (based on donor agreements)				
TOTAL	3,090,350.00	1,457,401.19	1,632,948.81	47.16%