Royal Government of Cambodia
United Nations Development Programme
PROJECT DOCUMENT

Reducing the vulnerability of Cambodian rural livelihoods through enhanced sub-national climate change planning and execution of priority actions

UNDAF Outcome(s):

Economic growth and sustainable development

Outcome 1.1: Sustainably developed agriculture sector promoting equitable physical and economic access to an increased number of safe and nutritious food and agriculture products.

Outcome 1.2: National and local authorities and private sector institutions are better able to ensure sustainable use of natural resources (fisheries, forestry, mangrove, land, and protected areas), cleaner technologies and responsive to climate change.

UNDP Strategic Plan Primary Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded

- *Output 1.4. Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented*

Expected CP Outcome(s):

CP Outcome 2: By 2015, national and local authorities, communities and private sector are better able to sustainably manage ecosystems good and services and respond to climate change.

Implementing Partner: Ministry of Environment

Responsible Parties: NCDD-S, MAFF-GDA, ALC and UNDP

Programme Period:	48 months
Atlas Award ID:	00085641
Project ID:	00093204
PIMS #	5174
Start date:	1 July 2015
End Date	31 Dec 2019
Management Arrangements	NIM
PAC Meeting Date	21 Nov 2014

Total resources required	**$20,427,500**	
Total allocated resources	**$20,427,500**	
LDCF (GEF)	**$4,567,500**	
Co-financing:		
Government parallel		$14,510,000
UNDP		$1,350,000
Total Co-financing		**$15,860,000**

Agreed by (Government):

Date/Month/Year

Agreed by (UNDP): Date/Month/Year

Brief Project Description

Cambodia is one of the poorest nations in South-East Asia. Approximately 70% of Cambodian households derive all or an important part of their income from agriculture and the majority of agricultural production is dependent on the monsoon rain and natural floods/recession of the Tonle Sap River and Lake. Climate change is likely to disrupt the natural cycle of the monsoonal system and the hydrological function of the interconnected Mekong-Tonle Sap River drainage system and therefore cause a significant impact on the livelihood and welfare of rural Cambodians.

This project has been designed to reduce the vulnerability of rural Cambodians, especially land-poor, landless and/or women-headed households. This will be achieved through investments in small-scale water management infrastructure, technical assistance to resilient agricultural practices, and capacity building support, especially targeting poor women, for improved food production in home gardens. Importantly, these services will be delivered by sub-national administrations (communes, districts and provinces) with a view to strengthen their overall capacity to plan, design and deliver public services for resilience building. The objective of the project, therefore, is to improve sub-national administration systems affecting investments in rural livelihoods through climate sensitive planning, budgeting and execution. The objective will be achieved through the following three Outcomes.

Outcome 1, **Climate Sensitive Planning, Budgeting and Execution at Sub-National Level Strengthened**, builds on the existing system of development planning at District and Commune levels. In particular, mainstreaming of climate change adaptation in the plans and investment programmes of ten Districts and their constituent Communes will be supported. Technical capacity for climate sensitive agriculture extension and for planning and implementation of climate resilient infrastructure investments will also be developed.

Outcome 2**, Resilience of Livelihoods of the most vulnerable improved against erratic rainfall, floods and droughts**, will facilitate investments in small scale water management infrastructure which will contribute to resilient agricultural production, in particular by overcoming unpredictable rainfall during the wet season. Beneficiaries will be members of vulnerable communities identified through the sub-national planning process and a detailed, participatory Farmer Needs Assessment will be carried out to identify suitable improvements to resilient agricultural livelihoods. Groups of poor and vulnerable women will be assisted to develop livelihood activities requiring only limited amounts of land and will receive complementary support for social capital building activities including leadership training and formation of savings groups.

Outcome 3, **Enabling environment is enhanced at sub-national level to attract and manage greater volume of climate change adaptation finance for building resilience of rural livelihoods**, will result in an improved system of performance assessment for climate change adaptation by sub-national governments, linked to the Performance Based Climate Resilience Grant awards that will co-finance infrastructure investments under Outcome 2. The capacity of the sub-national administrations to monitor, evaluate and plan improvements in capacity and performance for climate change adaptation will be strengthened.

The Ministry of Environment of the Royal Government of Cambodia will be the Implementing Partner, with a number of key technical Ministries providing support which will be coordinated through a Technical Advisory Group. To ensure cross-sectoral integration, responsiveness to local needs and sustainability, sub-national activities of the Project will be integrated with the NP-SNDD under the coordination of NCDD-S. The Project will be implemented in 89 Communes and ten Districts of Siem Reap and Kampong Thom Provinces over a four year period beginning in 2015.

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List of Acronyms

ACES	Association of Councils Enhanced Services Project (UNDP support to Local Government Association)
ALC	Association of Local Councils
APR	Annual Progress Report
ASPIRE	Agriculture Services Programme for Innovation, Resilience and Extension (IFAD financed programme 2015-21_
AWP	Annual Work Plan
CARD	Council for Agriculture and Rural Development
CSF	Commune-Sangkat Fund
CARERE2	Cambodia Reconstruction and Redevelopment Project phase 2 (UNDP 1996-2000)
CCAP	Climate Change Adaptation Plan
CCFF	Climate Change Financing Framework
CCCSP	Cambodia Climate Change Strategic Plan
CCD	Climate Change Department
CCTT	Climate Change Technical Team (Ministry representatives)
CCTG	Climate Change Technical Group (coordinated by NCDD-S)
CDB	Commune Database (of Ministry of Planning)
CSO	Civil Society Organisation
D&D	Decentralisation and Deconcentration
DAO	District Agriculture Office
DMF	District/Municipality Fund
FO	Farmer Organisation
FWUC	Farmer Water User Community
GDA	General Directorate of Agriculture (of MAFF)
GMC	Global Model of Circulation
IFAD	International Fund for Agriculture Development
iDE	International Development Enterprises (NGO)
IP3	3 Year Implementation Plan (of NP-SNDD)
LGA	Local Government Association (formerly the National League of Communes and Sangkats)
MAFF	Ministry of Agriculture, Forestry and Fisheries
MFI	Micro-Finance Institution
MoE	Ministry of Environment
MoP	Ministry of Planning
MoWA	Ministry of Womens'Affairs
MoWRAM	Ministry of Water Resources and Meteorology
NAPA	National Adaptation Plan of Action
NAPA-FU	UNDP NAPA Follow Up Project (in Preah Vihear and Kratie)
NCCC	National Climate Change Committee
NCDD-S	National Committee for Sub-National Democratic Development Secretariat
NGO	Non-Governmental Organisation
NIM	National Implementation Modality
NP-SNDD	National Programme for Sub-National Democratic Development
NSDP	National Strategic Development Plan
PBCRG	Performance Based Climate Resilience Grants
PDA	Provincial Department of Agriculture
PDoWA	Provincial Department of Womens'Affairs

PDoWRAM	Provincial Department of Water Resources and Meterology
RGC	Royal Government of Cambodia
RMC	Regional Model of Circulation
ROAR	Results Oriented Annual Report
Scale Up Project	UNDP support project to climate change mainstreaming at sub-national level
Seila	"Foundation Stone": Government decentralization pilot programme from 1996 to 2006
SIDA	Sweden International Development Agency
SNA	Sub-National Administration
SNIF	Sub-National Investment Fund
SNV	Netherlands based international NGO
SPCU	Social Protection Coordination Unit (of CARD)
TCC	Technical Coordination Committee (of Provincial and District Administrations)
TFC	Technical Facilitation Committees (under the Provincial and District Councils, co-ordinating the technical line agencies)
TPR	Tripartite Review
TSC	Technical Services Consultant
TSO	Technical Support Official
TSSD	Tonle Sap Poverty Reduction and Smallholder Development Project (ADB with IFAD)
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNFCCC	United Nationa Framework Convention on Climate Change
USAID	United States Agency for International Development
VRA	Vulnerability Reduction Analysis

1 Situation Analysis

1.1 National Context and Climate Change

1.1.1 Context, Economy and Agriculture

1. Cambodia is one of the poorest nations in South-East Asia. The Mekong River that traverses the country from the north to south, and the Tonle Sap Lake are two major geographical features of the country. Cambodia's climate is tropical and has two distinct wet and dry seasons. Monsoon rains that account for nearly 80-90% of country's annual precipitation occur during May to October with the highest monthly averages occurring in July and September. Approximately 70% of Cambodian households derive all or an important part of their income from agriculture and the majority of agricultural production is dependent on the monsoon rain and natural floods/recession of the Tonle Sap River and Lake. Therefore, the majority of Cambodian's livelihoods are directly dependent on the natural cycle of the monsoonal system and the hydrological functions of the interconnected Mekong-Tonle Sap River drainage system.

2. Cambodia has achieved impressive results in poverty reduction in the past decade, linked to strong growth in the agriculture sector and in the economy at large. Despite uneven distribution of the rewards of growth, recent research confirms that the majority of the population, including the predominant rural / agricultural communities, has benefited and even indicate a reduction in inequality as measured by the national Gini coefficient[1]. These gains are real but more progress is required: a large share of the rural population has moved from just below the poverty line to just above it, helped by improvements in agriculture, better market conditions and access to off-farm employment. A significant share (perhaps 20%) of the rural population remains excluded from these gains due to land tenure issues, and human resources and capital constraints, while many more households remain extremely vulnerable to falling back into poverty due to household-level shocks initiated by climate and/or economic factors. The challenge of building climate resilience is made more complex by the rapidly changing nature of the rural economy and agriculture technology (including introduction of some inherently unsustainable practices) and by the vulnerability of rural households and communities to non-climate shocks.

3. Cambodia has achieved relatively strong growth in agriculture production (sector GDP increasing by average 4.4% annually from 1998 to 2010 period, driven by increases in productivity and in cropped area: this is a high growth rate when compared to other East Asian and Pacific countries. However, there is evidence that this growth is stagnating as the easy gains from expansion of arable lands and adoption of readily available technologies are used up. As "easy yield improvements" start to taper off, a shift towards intensification of production from the same unit of lands is required. As the RGC makes an effort in this regard, there is a real risk that the Government pays greater attentions to fill more immediate gaps without sufficiently taking into account additional risks imposed by increasing variability in the amount and arrival of monsoon rains, increasing intensity of localized floods and droughts, and greater challenges of spatial and inter-temporal distributions of water resources.

4. Rice remains the dominant crop in the agriculture sector which employs the majority of the Cambodian population. The Government is strongly committed to increasing rice production and exports

[1] World Bank Cambodia Poverty Estimate 2013: Where Have All the Poor Gone?

of milled rice. Rice production grew by around 9% per year on average over a decade due to a combination of yield increases (54% from 1998/99 to 2008/09) and increase in cropped area[2]. However, there is evidence that this expansion of production is slowing as there is a shortage of further land to bring into production and the area under double-cropping has stagnated over the past 10 years[3]. One of the underlying reasons for this slowed growth is insufficient production inputs that promote intensification of production from a unit of available land. Public service delivery in the agricultural sector in general is characterized by its paucity and untimeliness especially in the areas of technical assistance and delivery of seeds, access to critical infrastructure such as secondary or tertiary irrigation channels, and capacity development support for seed purification and productivity enhancement. For example, availability of improved (i.e. high production) or drought-tolerant seeds is limited at the reserve stored at Provincial Department of Agriculture (PDA) and the distribution network is underdeveloped. Moreover, the existing drought- and flood-resilient seed varieties currently available can withstand up to 10 more days of no-rain or inundation compared with traditional varieties, providing farmers only limited additional buffers against unpredictable arrival of the monsoon rain. In addition, of the ten export varieties of rice seeds that are currently promoted by the RGC, seven have fixed photoperiods (some in the matter of a week), which means that these varieties work only in irrigated areas.

5. While rice farming is the backbone of the Cambodian economy, it is important to note that 21.1% of the total population is landless, with incomes often dependent on on-farm labour opportunities during the harvest season making them also vulnerable to climate risks. Another 45% is considered "land poor" with landholdings of less than one hectare[4]. Without much social protection support and livelihood enhancement support from the government, populations in these categories often engage in seasonal migration to supplement their highly volatile incomes.

1.1.2 Predicted Impacts of Climate Change

6. Global climate change is predicted to result in Cambodian average temperatures increasing by between 0.7 to 2.7°C by the 2060s, and 1.4 to 4.3 degrees by the 2090s[5]. The projected rate of warming is similar in all seasons and regions of Cambodia. Further, there will be a substantially increased frequency of days and nights that are considered 'hot' in the current climate. Annually, projections indicate that 'hot' days will occur on 14-49% of days by the 2060s, and 20-68% of days by the 2090s. Days considered 'hot' by current climate standards for their season are projected to increase fastest in June – August, occurring on 29-96% of days of the season by the 2090s. Nights that are considered 'hot' for the annual climate of 1970-99 are projected increase at a faster rate than hot days, occurring on 24-68% of nights by the 2060s and 38-88% of nights by the 2090s. Nights that are considered hot for each season are projected to increase most rapidly in June - August occurring on 73-99% of nights in every season by the 2090s. All projections indicate decreases in the frequency of days and nights that are considered 'cold' in current climate. These events are expected to become exceedingly rare, occurring on 0-7% of days in the year, potentially not at all under the higher emissions scenarios by the 2090s.

7. Average annual rainfall is predicted to increase as a result of climate change. This increase will occur mainly due to increased rainfall in the wet season (i.e. May - October). Conversely, the central predictions

[2] United States Department of Agriculture. 2010. *Cambodia: Future growth rate of rice production uncertain*. Accessed at http://www.pecad.fas.usda.gov/highlights/2010/01/cambodia/.
[3] ibid
[4] Cambodia Human Development Report 2011
[5] UNDP Climate Change Country Profiles

are for a decrease in rainfall during the dry season. The intensity of rain storms will increase: the proportion of total rainfall that falls in heavy events is projected to increase by up to 14% by the 2090s. Again, these increases arise mainly due to increases in heavy events in wet season rainfall, and are partially offset by decreases in the dry season. The magnitude of 1- and 5-day rainfalls are projected to increase by up to 54mm and 84mm respectively by the 2090s[6].

8. There is some regional variation in predicted changes, with rainfall in the June to August season predicted to increase in the northwest of the country and to decrease somewhat in the northeast.

9. Farmers and local communities commonly report that the climate is less predictable than formerly: average rainfall and temperature date conceal significant annual variations but farmers find that it is becoming more difficult to plan the timing of planting and other key activities, while floods and droughts can happen in seasons when they did not previously occur.

10. Sea level rise is likely to be significant for low-lying coastal plains and may also impact indirectly on the Mekong River system and its floodplains. According to the Fourth Assessment Report of the IPCC, sea levels in the region are projected to rise by between 0.18 and 0.56m by 2090. The highest predicted rise would cause permanent inundation of about 25,000 ha of coastal Cambodia[7].

Changes in Crop Yields from 2000 to 2050 (median value of the results from four GCMs)

	Low fertilizer		High fertilizer	
Crop	Keeping cultivar and planting month the same as in 2000	Optimal cultivar and planting month for 2050	Keeping cultivar and planting month the same as in 2000	Optimal cultivar and planting month for 2050
Rainfed wet-season rice	-2.3%	2.2%	-9.9%	-7.5%
Irrigated dry-season rice	-4.4%	-0.9%	-7.7%	-6.2%
Rainfed maize	-2.7%	-0.8%	-8.1%	-6.3%
Irrigated maize (any season)	-2.7%	-0.6%	-9.2%	-7.1%
Rainfed soybeans	-7.4%	-6.6%	-8.8%	-7.5%
Rainfed groundnuts	-8.0%	-6.6%	-8.1%	-6.7%
Irrigated groundnuts (any season)	-8.7%	-6.7%	-9.0%	-6.8%
Rainfed sugarcane	-5.2%	-4.8%	-5.2%	-4.8%
Rainfed sorghum	-11.0%	-9.0%	-11.0%	-9.0%
Rainfed taro	-5.7%	-3.1%	-10.3%	-6.2%
Irrigated taro (any season)	-9.5%	-6.6%	-12.4%	-12.0%

Source: Authors' calculations.
Notes: Irrigated sugarcane, soybeans, and sorghum had similar yields to their rainfed counterparts and were omitted from this table. The sugarcane crop model does not include fertilizer response. Aggregation was done by taking a weighted average of cropland in each square.

Reproduced from IFPRI 2013. NB that although low-fertiliser rainfed rice could experience a modest increase in yield, it would still yield much less than high-fertiliser rice which will be more impacted by climate change.

11. Impacts of climate change on Cambodian crop yields were estimated in a study by International Food Policy Research Institute[8]. While predictions based on different Global Circulation Models varied, the

[6] ibid
[7] Cambodia Climate Change Strategic Plan
[8] IFPRI 2013: Cambodian Agriculture: Adaptation To Climate Change Impact

median result was a significant loss of yield for rice and other key crops, after allowing for adaptations including changed cropping cycles and increased fertilizer use.

12. Despite the large uncertainties in the magnitude of the predicted changes it is clear that there will be major impacts most particularly on households and communities that depend on rain-fed agriculture. This includes not only land-owning farmers but also the land-poor and landless who depend on casual employment on their neighbours' farms and, increasingly, on commercial plantations. Women, and women headed households, are particularly vulnerable to the effects of climate change which are likely to include an increased burden in collecting water for domestic and agriculture use as well as increased transmission of infectious diseases. Despite impressive performances in GDP growth and poverty reduction in recent years, Cambodia remains as one of the poorest countries in Southeast Asia. According to the data of Cambodia Socio-Economic Survey (CSES), the overall poverty headcount in 2011 was 20.5% and the proportion of households below the food poverty line was 3.8%. Poverty is disproportionately rural: the rural poverty rate was estimated as 24% and food poverty 4.4%[9]. The Cambodia SNC (in draft) reports that the agriculture sector contributes about 30% of GDP, and about 70% of the population derives an important part of its living from this sector. Despite that the majority of Cambodians depend on agriculture, and predominantly rice, for an important part of their livelihoods, only about 24% of the rice area is irrigated and the fully-irrigated dry season crop accounts for only 14% of area and 20% of production[10]. By comparison, 50-75 percent of the land in the lowlands of south-central Thailand and southern Vietnam has been successfully brought under irrigation after decades of investment and development[11]. This demonstrates farmer's significant dependence on good weather for sustaining their livelihoods. While the currently available projections of rainfall patterns, as indicated above, generally point to a dryer dry seasons and wetter wet seasons, it is the uncertainty of rainfall that farmers themselves have indicated as most threatening. In a climate change vulnerability assessment conducted as part of the UNDP-assisted CCBAP covering 18 provinces, farmers indicated that it is the dry spell during the monsoon seasons that has the largest impact on their livelihoods. Other serious climate change impacts will result from damage to productive infrastructure (irrigation systems, roads etc.) from increased rainstorms and flooding, and potential reduction in rice yields associated with increased temperatures.

1.2 Root Causes of Climate Change Vulnerabilities

13. Key underlying causes of vulnerability of the agricultural sector in Cambodia are multiple. The coverage of irrigation, which would act as a buffer against fluctuations of water availability, is considerably low compared with its neighbouring countries. The Agriculture Census conducted in 2013 found that 32% of agriculture holdings use at least some irrigation[12]. Moreover the quality of existing irrigation schemes poses an additional challenge. Most of irrigation systems in the country were built in a very short period of 1975-78 during the Democratic Kampuchea regime. The irrigation networks were in general badly designed during this time and locations of the dams and canals were largely politically driven, rather than based on engineering feasibility or famers' needs. The underlying design weaknesses continue to affect recent rehabilitation efforts. Although the Government continues to invest heavily in irrigation rehabilitation and

[9] Data from Where Have All the Poor Gone: World Bank Poverty Estimate 2013. Poverty estimates based on the ID-Poor survey are broadly consistent.
[10] United States Department of Agriculture – Foreign Agriculture Service Commodity Intelligence Report: "Cambodia – Future Growth Rate of Rice Production Uncertain"; January 2010
[11] Ibid
[12] Royal Government of Cambodia: Census of Agriculture in Cambodia 2013 Preliminary Report.

construction, most of this work focuses almost exclusively on headworks and primary canals, with much more limited investment in distribution systems. The great majority of canals are of unlined earth construction: this is much cheaper than construction of lined canals or concrete channels but results in large land requirements, poor performance (slow flow rates and high seepage loss), susceptibility to damage from heavy rain and flood flows, and rapid deterioration due to siltation and erosion. Where local administrations or communities invest in canals, there is typically an imperative to maximize the length of canal constructed at the expense of necessary water control structures. Low level of irrigation infrastructure and its quality, compounded by infertile native soil in Cambodia, limits agricultural production to a single cropping season (either wet-season or flood recession, depending on the local topography) and partly explains the significantly lower yields per crop-hectare compared with neighboring countries.

14. In theory, access to dry season irrigation would enable farmers to switch from wet season rice to more profitable dry season rice cultivation while growing two short and/or cash crops during the wet season. Alternatively, access to wet season irrigation can reduce risk, encourage investment in inputs and enable multi-cropping during the rainy season[13]. However, investment in irrigation alone will not result in a sustainable improvement in agricultural livelihoods: other constraints include lack of knowledge of resilient and profitable crop technologies and market opportunities, shortages of labour and credit, and lack of means to offset risk, for example by crop diversification or through insurance. Access to extension services is weak and highly dependent on funding from projects or NGOs, while the quality of extension suffers from weak linkages to research and development, a traditional focus on productivity of a limited number of staple crops rather than diversification to take advantage of market opportunities, poor responsiveness to farmer demand and local agro-ecological conditions and markets and a time-consuming, didactic and teacher-centered style of learning. The availability of off-farm employment opportunities has resulted in traditional labour-intensive agriculture techniques becoming unattractive or uneconomic. Credit costs are high for all farmers and the poorest and most vulnerable are subject to poorer access, higher interest rates and the risk of losing their land (as collateral) in the event of crop failure. Therefore a focus on one production input, for example irrigation, is not sufficient: improved and resilient agricultural livelihoods require a comprehensive strategy of support matched to local circumstances and ensuring that constraints of water, land, labour, technology and credit can all be overcome.

15. Many of the rice species adopted in Cambodia have a fixed flowering period (some in the matter of a week) during which sufficient moisture level in soil is critical for good harvest. The large majority (about 90%) of rainfall occurs during May to October, which is precisely why rice is cultivated during this time. However, there is commonly a dry period during the wet season, typically in July/August but with large variance from year to year. This drought period can cause significant reduction in crop yields if it occurs at an unfavourable time. Alternatively, farmers may wait to plant their rice crop until the drought period has passed. Climate change, which is characterized by large variability in rainfall, is likely to bring about larger uncertainty about the occurrence of dry spells during the monsoon seasons. In addition, shortages of general production inputs continue to contribute to the underlying vulnerability of farmers. Extension services are generally understaffed and available primarily at the provincial level and their outreach limited, and farm mechanization, fertilizer use and access to affordable farm credits are all at suboptimal level.

[13] Charlesworth, P. (2012). *Climate Change Good Practice*. IDE Cambodia. A presentation input to IFAD COSOP 2012 (unpublished).

16. The high vulnerability of rural Cambodians to climate change has social as well as technical causes. Weak local institutions and a limited tradition of community solidarity (beyond the immediate kinship network) are caused or exacerbated by historical factors. Decades of armed conflicts have severely weakened traditional customs regulating land use, and access to natural resources, including land and water, is determined by wealth, position and power, with the most disadvantaged often excluded from productive resources. At the same time, modern institutions handling disputes remain weak[14].

1.3 Long term solution and barriers to achieving it

17. To meet the challenge of climate change, resilience of agricultural livelihoods must be increased through actions at multiple levels: the introduction of more resilient agriculture technology at the farm enterprise level; improvement of household incomes so that households can build up assets that provide a safety cushion in case of climate related shocks; improved access to services including credit and insurance; and increased social capital through the strengthening of community organisations. On the other hand, to reciprocate these actions, the existing sub-national system also needs to transform in a way that support them. For example, investments in infrastructure and services to improve climate resilience of rural livelihoods are in the realm of public services. The quality and quantity of such public services, and the way in which such services are designed and delivered, are not currently sufficient to prepare rural households to take up the challenge of climate change.

18. SNV, a Netherlands-based international NGO, conducted a comparative assessment of a range of interventions in climate resilient agriculture[15] supported by various projects. The highest ranked interventions were found to be drip irrigation (iDE); the climate change resilient cropping system developed by ACIAR (see box); followed by the introduction of improved rice seed varieties (CARDI), irrigation infrastructure supported by CAVAC and Save the Earth's building micro insurance scheme. These interventions are complementary rather than exclusive. The SNV report especially emphasizes the importance of providing technical training as a complementary investment to irrigation infrastructure.

19. The ACIAR-developed climate resilient cropping system is of particular interest as it is based on making better use of existing local and on-farm water resources including seasonal rainfall patterns. The system replaces the traditional single, long-maturing rice crop with two short-maturing crops which may be improved rice varieties, or rice plus an alternative cash crop.

[14] Cambodia Human Development Report 2011.
[15] SNV (2013): Study on Good Practices in Agricultural Adaptation in Response to Climate Change in Cambodia

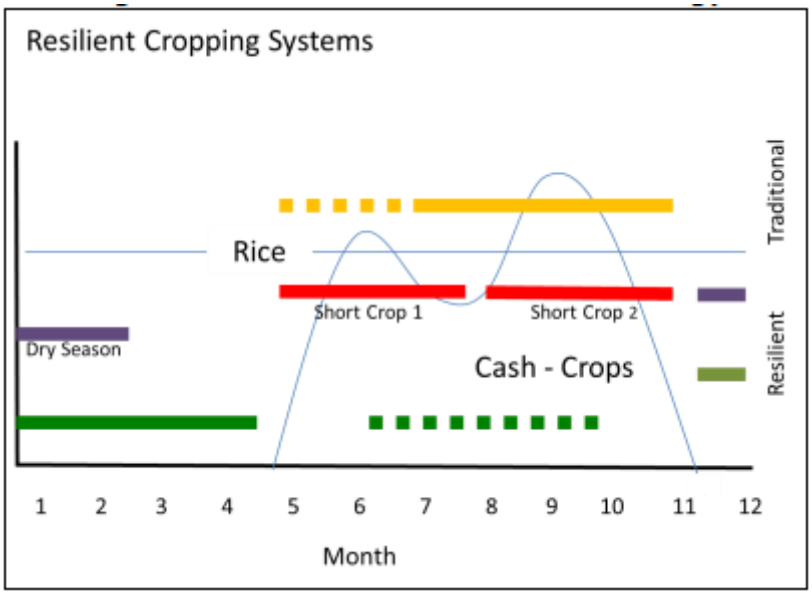

Figure 1: Climate Resilient Cropping System (reproduced from SNV report)

20. In order to enhance livelihood resilience to climate change in the long-run, one of the key requirements is to improve the management and use of locally available water resources for agriculture. Where unexploited water resources exist, this can include irrigation for dry season cropping, but improving efficient use of rainfall and surface water in the wet season through better storage and distribution systems, introduction of resilient seed varieties and changing cropping patterns to allow two wet season crops (either two rice crops or rice plus another field crop) are equally important. This indicates a focus on small-scale, locally adaptive water management infrastructure including distribution canals, control structures and small storage reservoirs. This approach will assist farmers to increase and diversify their farm income while reducing the risk of crop failure. The new opportunities for productivity enhancement through access to freshwater need to be supplemented by a strengthened extension support, diffusion of a diverse range of seeds (that include not only drought- or flood-tolerant species but also ones with longer photoperiod) and off-farm livelihood opportunities.

21. The most appropriate and cost-effective interventions to develop climate resilient livelihoods (including identification of locations and beneficiaries as well as suitable technologies) need to be identified case-by-case in response to local conditions and local needs. This must be done through participation of local communities that are most knowledgeable about creeping risks of a changing climate. This is particularly important when the information on simulated climate risks, derived from GMC or RMC, continues to rely on larger grids of regional simulations, which is too coarse to be used as a local planning tool. Also because of uncertainty about the precise nature of climate changes that will occur, as well as the potential for increased variability and frequency of extreme events, measures to strengthen resilience at the community and household level may be as important as technical responses calibrated directly to the predicted trends.

22. Lastly, for sustainability purposes, the diffusion of climate resilient livelihood support needs to be done in a way that builds and reinforces sustainable local institutions, both governmental and community-based on the existing mechanisms, rather than as piecemeal, ad hoc donor assistance. A key focus of this

institutional strengthening must include the local development planning process that exists at the provincial, district and commune levels and improving the links between this process, the networks of NGOs/CSOs that have been playing a critical role of filling the gap of public service shortfalls especially in rural Cambodia in the past, community-based organizations and the private sector. However, there are multiple barriers that prevent Cambodia from achieving the preferred long-term solution described above.

Financial barrier – Limited financial latitude for sub-national administrations and communities to for resilient livelihoods

23. Cambodia embarked on a process of Decentralization and Deconcentration (D&D) reform, beginning with the election of councils to govern rural Communes and urban Sangkats (the lowest level of local administration) in 2002. The National Programme for Sub-National Democratic Development (NP-SNDD) was initiated in 2010 and is intended to be implemented over 10 years under the leadership of the National Committee for (sub-national) Democratic Development (NCDD). The NP-SNDD is financed through three-year implementation plan known as IP3 (currently in the second phase of IP3). The NP-SNDD states explicitly that improved public and development service delivery at the sub-national level is critical for inclusive and equitable development of the country. Nevertheless, these developments have not been matched with the necessary financing for SNAs in the form of discretionary budget allocations from the central government to meet the needs identified by local communities. At the Commune level, Commune/Sangkat Fund (CSF), an unconditional formula-based grant, has been almost the sole source of financing for commune level development since 2002. However, CSF accounted for less than 3% of total national spending between in 2010. Provincial level expenditures (including Provincial departments of technical Ministries) was 11% of total budget expenditure in the same year[16]. The average allocation of the development component of CSF is around US$20,000 in 2014. This amount is hardly sufficient to meet basic development needs of commune, let alone adaptation financing needs. In other words, nearly 90% of total government expenditures are planned at the central level with little input from the bottom.

24. Another potential financing source for SNAs is donor development financing, which is characterized by its limited coverage and unpredictability. Some SNA receive additional funds earmarked for specific purposes under externally assisted projects – for example, the TSSD project provides Communes with additional finance for infrastructure development and agriculture extension activities. However, project finance of this type is unpredictable and limited to certain SNA. An additional financing window for grass-roots NGOs to meet adaptation needs of community is the UNDP-GEF Small Grant Programme and Cambodia Climate Change Alliance which are providing small- and medium-sized grants (approximately US$50,000 for small grants and $150k to $300k for medium-sized grants). Since 2011, CCCA has financed 20 medium-sized 20 grants. However this finance source also suffers from limited coverage and unpredictability, and as the work plans are generally determined by the grant applicant, the grants are only partially responsive to local planning priorities. The NP-SNDD envisages increasing financial autonomy especially for districts by introducing the discretionary District/Municipality Fund (DMF), but the amount of financing is currently set at $40,000 per district (or less than $1 per capita). In summary, in the foreseeable future, SNAs are likely to continue with extremely limited, and insufficient, amount of financial resources part of which are to be used to finance locally suitable set of adaptation measures aligned with their respective development plans. (This barrier will be addressed through financing to the local

[16] RGC National Institute of Statistics: Statistical Yearbook 2011 Tables 3.4 and 3.5

administrations contributing to Outcome 2 and through creation of an enabling environment for additional financing under Outcome 3).

Capacity and institutional barriers – Insufficient integration of climate risks into sub-national development planning

25. Achieving climate resilient livelihoods in rural Cambodia requires, among other things, a mechanism through which local communities can provide locally-specific knowledge of climate risks, how they have (based on historical information) or are likely (based on understanding of projections) to manifest in their locality. Further, a mechanism is needed to ensure that infrastructure and services planned by the local administrations and by sectoral agencies can effectively respond to the needs of local communities and assist them to address and manage emerging risks. This requires that climate resilience concerns are mainstreamed in the public expenditure management (planning, budgeting and implementation) process. A basic framework is in existence or being introduced, as discussed below, but the sub-national administrations lack the capacity, experience, and a fully adequate set of planning tools to mainstream climate change concerns effectively.

26. Cambodia has a well-established system of sub-national development planning which emerged during the Seila Programme (1996-2006) and with support from UNDP projects including CARERE2 (1996-2000), Partnership for Local Governance (2001-2006) and Project to Support Democratic Development through Decentralisation and Deconcentration (2006-2010). Under Seila, a Provincial Facilitation Teams (PFT) and District Facilitation Teams (DFT) totaling more than 700 staff and supported by advisers, were established to support the planning process, while Ministry of Planning and its Provincial Departments were responsible for design of the planning system and for data support. This support system has been adapted and institutionalised under the National Programme for Sub-National Democratic Development (NP-SNDD) overseen by NCDD-S.

27. The three sub-national levels of government (Capital/Province, District/Municipality and Commune/Sangkat) each prepares a five-year development plan (coterminous with the mandate of the elected Council) and an investment programme which identifies and costs development interventions required to achieve the plan. Integration between planning at the different levels is achieved through a District/Municpality Integration Workshop and the more recently established Provincial Consultation Workshop. The District Integration Workshop is a widely known and understood process for aligning the development priorities of the Communes with the resources available through State technical agencies and non-government actors (principally NGOs but private donors and the private sector may also participate). The Commune Development Plans and Investment Programmes are based on a bottom-up process featuring annual meetings in each village led by an inclusive Commune Planning and Budgeting Committee. Support to local planning is provided by Commune/Sangkat Support Unit within the District Administrations and the Planning and Investment Division of the Provincial Administration and the Planning and Commune Support Units of the District Administration – these units having taken over the responsibilities of the Seila PFT/DFT. As divisions of the sub-national administrations, the basic costs (salaries etc) of these units are included in the Provincial and District budgets respectively. The "IP3" three-year implementation plan of the NP-SNDD provides additional support for operational costs (e.g. travel expenses) as well as technical assistance.

28. Although the local development planning system is well-established and widely appreciated, particularly at the Commune level, there are a number of persistent weaknesses in the implementation of

the system. The use of data in the planning process is generally ineffective. Data collected locally by the Ministry of Planning and compiled in the CDB is presented in a document known as the Commune Profile and in sectoral scorecards with MDG-linked indicators, using a system developed with UNDP assistance. These documents are discussed in planning meetings but it is not clear that they have any significant influence on outcomes. The development plans and investment programmes are not constrained by available resources, so the result has the nature of a comprehensive wish-list from which it can be difficult to determine which interventions have the highest priority. The process for allocating actual resources (principally, at Commune level, the Commune/Sangkat Fund) to projects is weakly articulated in the planning guidelines and the basis for budgeting decisions is often unclear.

29. The planning system as it has developed to date does not address climate change adaptation needs in a systematic, cross-sectoral way. Planning participants are generally aware of the idea of climate change but do not distinguish it clearly from the problems associated with floods and droughts, which are treated as a "disaster response" issue rather than a process of long term change and adaptation. The formal planning guidelines currently in force mention climate change only briefly in the context of the "environment" section of the plan.

30. Although the local development planning process is designed to ensure equal participation of women (for example, though gender-balanced representation on the Commune Planning and Budgeting Committees) and plans include sections on gender and women's priorities, the overwhelming majority of senior decision-makers are men and it is not always clear that women's priorities are given equal weight in budgeting decisions. Therefore, in the specific context of climate sensitive planning and budgeting for climate change adaptation actions, there is a continuing need to ensure that gender concerns are mainstreamed and that women's voices are given equal weight.

31. The need to mainstream climate change adaptation in the planning guidelines is recognized by NCDD-S and is being addressed both by local pilots of CCA planning and by changes to national guidelines. The first LDCF-financed project (locally known as the NAPA follow-up project), implemented by MoWRAM and MAFF with UNDP assistance, introduced Vulnerability Reduction Assessments (VRA) into the five-year Commune Development Plan and annual Investment Programme formulation process in 16 pilot communes. The VRA process was also adopted by NCDD-S' pilot Local Governments and Climate Change (LGCC) project which also piloted a district level Climate Resilience Strategy. A number of other projects including the UNDP support to climate change mainstreaming (known as the "Scale Up project" and NGO grantees of the CCBAP have also tested VRA and it is believed that VRA has been carried out in around 100 Communes (out of the total 1,633) to date. A revision of the VRA guidelines is currently being undertaken by CCBAP working with NCDD-S. However, there is still insufficient critical mass of experience to institutionalize this process at nation-wide scale. Moreover, the current VRA process is exclusively perception-based by community members and has scope for integrating more objective information such as soil classification and statistics on access to water and resilient seeds so that local development plans can be guided by quantifiable indicators.

32. The NCDD-S, which is the key coordinating body for decentralization reform, has been working to mainstream climate changes into sub-national development process and ensure alignment with the CCCSP. A Climate Change Technical Group (CCTG) has been created, with NCDD-S playing the leading and coordinating roles, and members from Government: MoE, MEF, MoP, and National Committee for Disaster Risk Management, development partners: SIDA, EU, UNDP, UNCDF and ADB, and from CSOs. NCDD-S, with technical assistance from UNDP, is preparing a guideline on mainstreaming climate change

adaptation and disaster risk reduction into the sub-national planning process and the immediate task of the CCTG is to provide comments this guideline, which is expected to be introduced in 2015.

33. In summary, a good basis for local development planning exists in Cambodia and some progress has been made on developing guidelines and tools to mainstream climate change concerns in planning and public expenditure management. However major barriers remain to overcome before this can be fully achieved, including:

a. Existing plans are based on a business-as usual scenario, except in a few locations where project-specific interventions have assisted in identifying the implications of climate change;

b. The level of climate change awareness and the understanding of how to plan and implement adaptation measures remains low, among both local community representatives, planning officials and officials of relevant technical agencies;

c. New guidelines will be introduced shortly, but these remain untested and quality of implementation and sharing of best practice experience will be critical to ensuring that climate change adaptation needs are adequately identified and addressed;

d. Specific tools, implemented within the framework of the guidelines, will be needed to help local communities identify and overcome the specific challenges they face and in particular, to ensure that available resources are effectively directed to support the most vulnerable communities. These tools will need to overcome the general weakness of the planning system, identified above, in ensuring the voices of the most vulnerable are heard, in using data effectively in planning and in linking budgeting decisions consistently to planning objectives.

34. This barrier will be addressed mainly by Output 1.1 of the Project.

Institutional barrier – Misaligned incentives for promoting climate-sensitive at sub-national level

35. The limited available financial resources and capacity constraints within SNAs, and the District Administrations' Planning and Support Units that assist them, as described above, culminate in the inability of SNAs to use their development planning process as a guiding tool for identifying adaptation needs within their constituencies, set vulnerability reduction targets on the basis of needs and available (and reliable) funding, identify adaptive investment actions, source technical expertise and financial means to implement the plan, and revise the development/investment plans for the next cycle based on the assessments of the previous investments. With the level of discretionary budgets that are currently made available to SNAs and the fact that investments generally come from centrally-planned sectoral budget allocations, largely independent of local development targets, SNAs find few incentives to properly plan and budget development and adaptation priorities. NCDD-S has piloted the use of Performance Based Climate Resilience Grants (PBCRG) providing increased resources to SNA that demonstrate the ability to use funds effectively, but so far the number of participating SNA and the size of incentives offered are small. Also under NP-SNDD a Citizen Scorecard is being introduced, providing community members with a formal mechanism to evaluate the extent of the effectiveness of public spending for meeting objectives in the local development plans. While this is very important for increasing accountability of SNAs to its constituencies, this tool is of limited effectiveness as the volume of investments (i.e. the discretionary funds) that is under the scrutiny of citizens is only a very small fraction of the overall investments made at the subnational level. To maintain the spirit of increasing accountability of SNAs envisioned in this Citizen Scorecard, and in

NP-SNDD in general, and to enhance the effectiveness of community-oriented adaptation investments, there must be a stronger incentive mechanism that rewards those SNAs that perform well in identifying priority risk areas, adopting effective climate resilient design standards, and ultimately meeting the development/adaptation targets set at the beginning of the development and investment cycle (This barrier will be addressed mainly by Output 3.1 and 3.2).

Human resources barrier – Technical capacity constraints for climate-resilient agriculture and water infrastructure design

36. At the sub-national level, there are significant shortages of institutional or human resource capacity to deliver services that aim at increasing climate resilience of Cambodian rural livelihoods. There have been a number of initiatives to introduce climate resilient agriculture techniques through extension services but these have been somewhat fragmentary and have suffered from the systematic weaknesses of extension delivery noted above. Agricultural extension officers and NGOs that are providing agricultural assistance are not only limited in number, but also lack experience and skills in providing climate resilient farming techniques. The services currently provided by extension officers or NGOs are tailored only with a view to increase the yields of ongoing single crop practice, rather than increasing the resilience of farmer's livelihoods from diversification. In particular, SNA cannot access adequate technical support to respond to local needs by effective investments in climate resilient agriculture extension. For infrastructure investments by the SNA including irrigation, NCDD-S has produced a technical construction manual which is broadly adequate but does not specifically address climate resilience. Compliance with the standards in the manual is uneven. Canals constructed with CSF resources are almost always simple channels and lack spillways and control structures, making them very vulnerable to flood damage. The Communes receive services for design and construction supervision from a team known as Technical Support Officials (TSO) but they lack skills and experience for climate resilient irrigation design. The Ministry of Water Resources and Meteorology (MoWRAM) does not have specific climate resilient design standards, while schemes supported its Provincial Departments (PDoWRAM) show similar technical weaknesses to the CSF schemes. In other words, the design standards employed by TSO, PDoWRAM and local contractors/engineers responsible for designing and construction of rural irrigations work currently do not take into considerations increasing volume of rainfall and additional run-off, extreme events such as floods and cyclones, or the increasing needs to manage the flow of water under a changing regime of the monsoonal system. Strengthening of capacity for climate resilient agriculture and for irrigation development are complementary: for example, obtaining access to irrigation opens a possibility of diversified livelihoods, in theory, by introducing cultivation of cash crop during the dry season and/or high-yield short season variety during the second half of the wet season. However, unless technical capacity in both areas is enhanced as an integral element of planning-budgeting-execution, it is likely that a significant opportunity for introducing resilience at the sub-national level will be lost (This barrier will be addressed mainly by Outputs 1.2 and 1.3).

Coordination barrier – Fragmentation of development and adaptation services at the sub-national level

37. While improved climate resilient agriculture technique and improved access to and management of irrigation water are inseparable production inputs critical for climate resilient livelihoods, in reality, public services related "irrigation" and "agriculture" are under the purviews of different government bodies. Agriculture extension is formally within the mandate of the Ministry of Agriculture, Forestry and Fisheries, but funding for extension service delivery is mainly driven by donor funding and NGOs. Irrigation

investments are mainly managed from national level by MoWRAM. At local level, coordination is often weak, with lack of extension support to assist farmers to take advantage of improved irrigation being a particular problem. Separate farmer-based organizations for irrigation management and for agriculture production also result in inefficiencies and missed opportunities. Capital investments financed domestically or supported by external donors that are channeled through the sectoral allocations, which are the predominant form of donor assistance for climate change adaptation in Cambodia, are inherently susceptible to inefficiency due to this institutional separation.

38. Similar phenomena can be observed outside public service delivery. In Cambodia, a range of development assistance is provided by non-government agencies which include both adaptation and non-adaptation services. Despite their potential contributions to filling the gap of public service shortfalls in rural areas, they are in general characterized by their small scale of operations and fragmentation of their support, and their contributions to meeting the development targets and increasing climate resilience in respective operational areas are hardly recognized by SNAs.

39. The key mechanism for coordinating the sub-national development plans with the plans and programmes of sectoral technical agencies (for example, Agriculture, Water Resources and others) and with externally supported project and NGOs, is the District Integration Process, the centerpiece of which is an annual District Integration Workshop. Through this process, the priorities of the Communes are shared with potential development partners, and the partners have an opportunity to offer a response. Less well established is a Provincial Consultation Workshop that performs a similar function at Provincial level. However, while the DIW is an effective mechanism for informing SNA about the plans of development partners, it is less effective in ensuring that these plans are responsive to local priorities or the local situation and at present does not include measures to identify and coordinate specific adaptation targets. For this reason, coordination between different sectors, as well as between sectors and SNA, to obtain synergetic impact on building climate resilience is weak. For example it is not uncommon that the Ministry of Water Resources and Meteorology rehabilitates/extends the primary and secondary elements of irrigation systems, while resources and technical knowledge to efficiently distribute water via tertiary canals (where SNA could plan a role) are missing and the commune continues to lack sufficient technical assistance to promote multi-cropping on the newly-irrigated lands. Currently, there is a significant lost opportunity as these adaptation services continue to be provided in an uncoordinated and piecemeal manner. This barrier will be addressed through the planning process (Output 1.1) but also by making the SNA the implementing agency for the infrastructure and livelihood activities under Outcome 2, with the legally established cross-sectoral Technical Facilitation Commitees providing technical support.

Knowledge Management Barrier: Lack of effective, cross-comparable measurement of results and sharing of knowledge

40. As the experience of climate change adaptation initiatives accumulate, efforts to strengthen knowledge management and synthesis are also emerging. With support from the Cambodia Climate Change Alliance, the Ministry of Environment is taking a lead in this effort at the national level. They are also currently working on the development of standardized indicators within the Cambodia Climate Change Strategic Plan. Once developed, all climate change initiatives in the country can essentially be guided and monitored by a common set of indicators. Other relevant efforts to strengthen knowledge management include introduction by USAID of a standardized household survey tool under its Feed the Future Programme, which includes much of the household level data needed to measure changes in vulnerability and resilience at the household level, and the establishment under the ASPIRE programme of a facility for

field-testing and evaluation of promising climate resilient agriculture technologies. However, these knowledge management efforts do not specifically address the need, within the context of sub-national local development planning and budget execution, and delivery of services in support of resilient livelihoods, to ensure that results are measured, lessons learned successes – or failures – are well substantiated by evidence and that the resulting knowledge is shared amongst the development community. This situation can lead to repetitive piloting, sometimes of ideas with limited technical viability, while proven approaches are not scaled up due to lack of resources. This problem will be addressed through Output 1.4 of the project.

1.4 Characteristics in Target Communities

1.4.1 Selection of Target Communities

41. The provinces of Siem Reap and Kampong Thom have been identified as the target provinces for the project. As discussed in Annex 7, these provinces were selected based on an analysis of indicators of climate vulnerability and of characteristics that matched the project focus on resilience of rain-fed agriculture livelihoods. Potential overlaps with other projects was also a consideration. In particular, overlap with the pilot target provinces of the ASPIRE programme of IFAD was avoided. This is because ASPIRE will support similar activities including climate resilient agriculture extension and performance based infrastructure grants. ASPIRE is likely to make heavy demands on the capacity of Provincial Departments of Agriculture and their District Offices which would not be conducive to simultaneously supporting the LDCF project. Conversely, by operating in different provinces the two facilities (ASPIRE and the LDCF project) will be able to benefit from cooperation on development of methodology and technical materials and to share lessons learned.

42. The situation analysis of the target communities that follows is based on field work undertaken by the project design team in April and June 2014 and is supported by data from the National Census of 2008, the Commune Database of Ministry of Planning and other sources.

43. During the detailed project design phase, Kampong Thom and Banteay Meanchey province were initially selected as potential project target locations based on analysis of climate data, and field studies were conducted in these two provinces. However, after the results of UNDP's Multidimensional Poverty Index analysis became available, Siem Reap province was eventually selected instead of Banteay Meanchey. Siem Reap is a neighbouring province to Banteay Meanchey and its rural areas share many of the same characteristics. Taking both field research findings and data analysis into consideration, it is considered that there is adequate evidential basis for the situation analysis presented below and in the Annexes.

1.4.2 Geographical Situation

44. Both provinces lie within the Tonle Sap agro-ecological zone and consist mainly of low-lying agricultural land and forest. Siem Reap Province is located in northwest Cambodia to the north of the Tonle Sap lake. The province consists mainly of low-lying land with some upland areas in the northeast. Siem Reap is subdivided into eleven rural Districts plus Siem Reap city which is classed as a Municipality.

45. Kampong Thom Province is located on the northeast side of the Tonle Sap lake and includes low-lying floodplain areas and higher ground to the northeast.

46. Both provinces have a monsoon climate with most precipitation occurring during the wet season from May to October. The period from November to January is relatively cool and mainly dry, while

February through April is hot and humid but with little rain in most years. Siem Reap experiences around 1250mm to 1550mm annual rainfall, while Kampong Thom has slightly less - around 1400mm to 1600 mm in the southwest and slightly more rain in the northeast.

1.4.3 Local Economy

47. Both Kampong Thom and Siem Reap provinces are predominantly agricultural. According to the 2008 Census, 86% of the workforce in Kampong Thom and 73% in Siem Reap is employed in the agriculture and natural resources sectors. Rice is the predominant crop in both provinces, with much smaller areas of other field crops including cassava, corn, sugar cane, mung beans etc. Smallholder farmers typically grow vegetables in garden plots and raise livestock including chickens, pigs and cattle. Larger scale plantation agriculture, including commercial rice growing as well as cassava and some tree crops, is increasingly important in some districts.

48. In both provinces, rice is predominantly a wet season crop. The wet season crop accounts for 71% of total production in Kampong Thom and 74% in Siem Reap. The most important dry season cropping occurs in areas subject to seasonal inundation around the Tonle Sap Lake, where recession rice is grown. Full dry season irrigation, permitting double or triple cropping, is quite limited in scale despite some large investments in irrigation infrastructure by the central government. It is estimated that 20% of land in Kampong Svay District, Kampong Thom Province, is double cropped: this is thought to be the highest of any of the proposed target Districts.

49. Industry and urban sector services are under-developed in both provinces outside the Municipalities and a few other significant urban centres. However, migratory employment, in agriculture and non-agriculture occupations, has become extremely important to the rural economy and has both positive and negative impacts on the rural economy and society. Migratory employment patterns are different for women and for men. For women, the most important form of migratory employment is in the garment manufacturing industry, though women also migrate for work in other industries and in service occupations. These tend to be long-term positions and it is mainly young, unmarried women who migrate. Men migrate for work in urban occupations such as construction but also for agriculture labour on plantations. These types of work tend to be casual or seasonal in nature and may complement or compete with own-farm agriculture work. Both sexes (though more men than women) migrate to Thailand for employment, usually on an informal basis. Migration to Thailand is important throughout all the lowland provinces of Cambodia but especially so in the northwest, including Siem Reap, due to the proximity of the border. Most Cambodians working in Thailand do so on an informal basis. The difficulty and risk of crossing the border, as well as the travel distances and the demands of the employment itself, may mean that migrants to Thailand may be absent for longer periods than those seeking casual work inside Cambodia.

50. In discussions with groups of farmers in the project area, rice growing was identified as the most important livelihood activity together with laboring and (wild) fishing. Vegetables, livestock and aquaculture were of lesser importance and non-rice crops and various types of self-employment were regarded of least importance (see Annex 4). These results reflect the specific communities interviewed and some variation would be expected according to local circumstances.

1.4.4 Agriculture Technology and Production

51. Most farmers grow a single rice crop, most commonly a main wet season crop (approximately, July to November, with variations according to annual weather variations and local topography). Farmers on

low-lying land may grow a recession crop (typically November to February) and some farmers may grow a second dry season or early wet season crop where water conditions allow. Most farmers now plant by broadcasting rather than the traditional transplanting methods and use improved seed varieties, although seed is more commonly retained from the previous harvest rather than bought from a supplier. Farmers use significant amounts of chemical fertilizers – this is also a change from traditional practice, while ploughing is predominantly by hand tractor. Harvesting machinery is also becoming increasingly common.

52. Rice yields vary considerably between seasons, according to local soil and water conditions, seed varieties and the agriculture techniques employed, but Commune Database (CDB) data indicate average wet season yields of only 1.6t/ha in Siem Reap and 1.7t/ha in Kampong Thom. Dry season yields are higher: 2.2t/ha in Siem Reap and 2.6 t/ha in Kampong Thom, but these yields are low compared to modern average yields for Cambodia (2.95t/ha overall) and regionally (e.g. Vietnam around 4.95t/ha). Most farmers grow rice to meet their domestic consumption needs in the first instance and then sell any surplus (or any amount needed to pay off debts owed to input suppliers). With low yields and small plot sizes, this means that many poorer farmers produce predominantly for own consumption and gain rather little cash income from rice growing.

53. Low rice yields may be associated with poor soil fertility. In Banteay Meanchey Province in particular, soil erosion, nutrient loss and loss of water holding capacity are said to be a particular problem and to be exacerbated by production techniques used on the larger commercial farms[17]. This problem is also likely to affect neighbouring areas of Siem Reap and perhaps the Tonle Sap floodplain area more generally.

54. Most vegetable growing is carried out on small home garden plots in the wet season and is predominantly for own consumption. Only a minority of farmers attempt year-round, market-orientated vegetable production.

55. Livestock production is also mainly small scale and informal in nature, with chickens and cows in particular allowed to roam freely (free grazing of cattle in the dry season is an additional discouragement to dry season rice cropping in many communities). Sickness and mortality rates are high. Rather than relying on livestock for a regular cash income, farmers tend to sell livestock when they need cash – for relatively small purchases, a chicken may be sold, while cattle are sold in case of a major cash need such as a health or other emergency in the household.

1.4.5 Access to Land

56. The average area of rice land is around 2.45 ha per farm family in Kampong Thom and around 1.53ha per farm family in Siem Reap[18]. However this average figure conceals large variations, with significant numbers of landless families (typically around 20%) and a minority of households having relatively large land holdings. There are also some large blocks of rice land owned by outside investors though these may then be rented back to local farmers. Inequality of land distribution appears to be increasing and may be driven by factors including population growth (family plots are sub-divided as new households are formed, until the plot size becomes uneconomic), forced sales due to debt, family emergencies or natural disasters, and consolidation of land holdings by better-off families. Broadly, three categories of household can be recognized: those who are either landless or whose land holdings are not large enough to meet the

[17] Personal communication: H.E. Sokan Rithykun, Director-General, General Directorate of Agriculture
[18] Calculated from CDB 2012 data

household's rice consumption needs (i.e. roughly, less than 0.5ha) – this category roughly corresponds to the households holding ID-Poor cards; second, households with enough land to meet their rice consumption needs and to produce a surplus for sale, but probably not enough to support the household without some off-farm supplementary income (land holdings roughly 0.5-2.0ha) and those with land holdings large enough (above 2ha) to meet household needs for both food and cash income primarily by farming (see Annex 7). Typically around 60% of farmers in a village may fall within the middle category.

1.4.6 Access to Irrigation

57. Within the project area only a minority of land is served by fully developed irrigation schemes (for example within the large Stung Chinit irrigation scheme in Kampong Thom). For much of the remaining area, dry season irrigation is not feasible because of a lack of an adequate water source. Even where irrigation water is available, other factors often deter farmers from growing dry season or second rice crops. These factors include experience of poor results from dry-season cropping in the past, which in turn may be linked to lack of technical knowledge, poor soil quality and the greater prevalence of certain types of pests in the dry season. Competing demands for labour from off-farm work in the dry season are also a factor.

58. In the majority of the project area, farmers grow a single, rain-fed rice crop in the wet season. Rainfall may be supplemented with irrigation which may be supplied from local watercourses or from a canal linked to a larger scheme. Commonly, these local canals provide adequate water for double cropping for a small number of households, but can be accessed (using diesel pumps and pipes or hoses up to several hundred metres in length) by larger numbers of farmers for supplementary irrigation during dry spells that occur in the growing season. Most farmers do not own pumps; the cost of pump hire and fuel is typically around $0.05 per cubic metre of water[19]. Small investments in improved irrigation infrastructure can be highly effective in improving the efficient use of available water resources, including preventing crop losses due to drought and making double cropping feasible for a wider group of farmers.

59. The potential for improving access to irrigation is highly location-specific and determined by availability of a water source, local topography and availability of land for constructing a canal. Typically it is extremely difficult to agree a new line for a canal crossing existing farmland – for this reason the great majority of canal schemes follow the lines of older (usually Khmer Rouge era) canals that may be disused and fully silted but are still recognized as public land.

1.4.7 Access to Extension Services

60. The extension services of MAFF are organized through the Extension Office of the Provincial Department of Agriculture (PDA) and the extension staff attached to the District Agriculture Offices (DAO). In Siem Reap the Extension Office has five staff at the Provincial level and one extension officer located in each District. In Kampong Thom there are eight extension staff in the Province and one posted to each District office.

61. The PDA core budget provides very limited funds to support extension activities. As a result, almost all extension activity conducted by the PDA and DAO is through an externally assisted project. In the target provinces, the most important ongoing project is the ADB-IFAD Tonle Sap Smallholder Development project (TSSD) which is implemented in nine Districts in Siem Reap (four of which are in the target proposed for the LDCF project) and six Districts in Kampong Thom (also four LDCF project Districts). In

[19] Reference 2011 report on climate resilient irrigation

TSSD-supported districts there is a team of around five staff in the DAO and responsible for carrying out various extension activities including improved seed demonstrations and supporting seed production groups. The TSSD also supports extension activities contracted from service providers by the Commune councils.

62. Other extension services are provided by NGOs but the distribution of these services is very uneven. Most farmers do not enjoy regular, direct access to extension advice.

63. Some private sector input sellers also engage in extension activities, typically on behalf of one of the major supply companies. Often, these activities are conducted in partnership with PDA who assist in identifying demonstration plots and liaising with local authorities to attract farmers to field days. Typically the activity consists of a field demonstration of a specific product. Input sellers receive training from PDA; this should assist the sellers to provide quality advice to their clients, but the quality of these trainings is not clear and farmers seem to generally distrust the advice they receive from input sellers. The social enterprise "Lors Thmey" promoted by iDE tackles this problem by training respected local farmers as extension agents and input sellers, backed by a quality-assured supply chain, but iDE do not have current plans to extend Lors Thmey into the project area.

1.4.8 Off-farm Employment

64. Off-farm employment is an important component of the incomes of most households in the poorer and middle categories in the project area. Farmers rated income from laboring alongside rice production and fishing as the most important livelihood activities (see Annex 7). In discussions with local communities, it was estimated that access to employment opportunities depends on forming a relationship with plantation managers or labour agents, and that those seeking labour employment can typically find work for around 10 days per month, at wage rates of around $4 to $5 per day. Longer term migration is also important: in one community visited by the project design team (in Banteay Meanchey) it was estimated that 40% of the village population had migrated to Thailand to seek work.

1.4.9 Labour Availability

65. The availability of employment opportunities and long-term migration for work has had a significant impact on availability of labour for on-farm agriculture. In turn, this is seen as an important factor driving mechanization and changes to agriculture techniques such as the adoption of broadcast planting for rice. These factors also affect the willingness of farmers to commit large amounts of time to classroom-style agriculture trainings. Labour power is an important factor in poverty, with some households having no able-bodied adult members or a high proportion of dependents suffering in consequence. There are also many households where the young, single adults and married men have migrated to find work, leaving what becomes effectively a female-headed household with elderly dependents and children. It is important to recognize the constraints of labour and time availability in the design of extension activities – both the livelihood activity itself, and the modality of the training, must be suitable to the needs of the beneficiary households.

1.4.10 Credit Markets

66. There is typically more than one (sometimes five or six) formal micro-finance institutions (MFIs) active in the villages in the project area. MFIs provide small loans with relatively low interest rates (generally around 3% per month) and clear schedules for payment of the interest and principal. Often, the borrower is required to state the purpose of the loan which may be to buy a capital item or to invest. Most

commonly, a land title (which may be a "soft" land title issued by the Commune Chief) is required as collateral. MFIs have cooperated to develop a database of borrowers in order to reduce a perceived problem of multiple loans from different MFIs taken by a single borrower. In principle, a borrower who defaults may forfeit his or her land, though it is unclear how often this happens in practice. A number of MFI have "group loan" schemes specifically designed for the poor, under which a mutual guarantee from other members of the group substitutes for collateral.

67. Rural Cambodians, and particularly the poor, tend to be nervous of interaction with formal finance institutions and to regard the conditions of borrowing from an MFI as somewhat onerous. The ease of access and flexibility of borrowing from the informal market explains the persistence of this system despite the higher headline interest rates (usually at least 4% per month but can be much higher depending on the relationship of trust or lack of such, between borrower and lender). While some businesspeople specialize in money lending, it is common practice for rural Cambodians with spare cash to lend it out at interest to those who need to borrow.

68. Farmers obtain much of their working capital through credit-in-kind, i.e. agriculture inputs obtained from input suppliers on a promise of payment after harvest. Often the interest rate is expressed simply as a price premium, e.g. fertilizer that costs $30 cash may cost $40 with payment deferred for three to four months (see Annex 7). Equivalent interest rates appear to be around 5% per month. During field research the project design team spoke to a number of input suppliers whose operating systems varied considerably. Some suppliers told the team that they never sell on credit (though the credibility of this statement is doubtful given the very widespread reporting of buying on credit by farmers). Others reported offering credit on a very informal basis to trusted clients. Some suppliers described quite sophisticated schemes for assessing credit-worthiness, setting interest rates and mitigating default risks.

69. The other major type of credit available to rural Cambodians is the savings group or revolving fund group, of which quite a number exist in the project area. The TSSD project is financing "Livelihood Improvement Groups" (LIG) based around a revolving fund financed by the project and earmarked for loans to support agriculture production. Other "pure" savings groups are financed only by the deposits of the group members. The long term sustainability of these groups is uncertain; IFAD experience with the revolving fund model indicates that lack of financial management capacity within the group is a constraint. The LIG provide loans at minimum 2% interest, with profits retained within the fund. In theory, this means that borrowers pay interest into a fund that they themselves control; however from the point of view of the individual group member, the advantage of the revolving fund over the MFI model is essentially the somewhat lower interest rate offered.

1.4.11 Situation of Women

70. Women's and men's domestic and economic roles are not rigidly separated in rural Cambodia, but there are certain roles that are traditionally performed predominantly by women. Broadly, women take a greater role in activities carried out in or close to the home such as vegetable gardening and chicken raising, but it may be a mistake to see these activities as exclusively "women's activities": within any particular livelihood enterprise, there may be sub-activities that are mainly performed by men and excluding men (e.g. from trainings and production groups) can occasionally be found counter-productive.

71. Women in the project area are increasingly burdened both by the effects of social change, particularly the disruptions to community and family life caused by migratory labour, and by the effects of climate

change. The design team investigated the situation of women in the project area and a short fieldwork report is included as Annex 5. Key points are that:

a. Water insecurity disproportionately impacts women as they are mainly responsible for fetching water for domestic use and, often, for watering home vegetable gardens. These tasks fall even more heavily on women when able-bodied men are working away from home.

b. Women are doubly burdened by increased disease transmission associated with high temperatures and water shortages, as they are susceptible to become ill themselves and are also expected to act as carers for sick family members;

c. Women's workload is heavy: they are responsible not only for domestic work, but also for the growing of vegetables, raising pigs, and raising chickens. Due to cultural constraints, their husbands rarely help them in these tasks;

d. Women traditionally act as managers of the household finances including interactions with credit providers. Where a household is trapped in a debt cycle due to high interest rates and inability to repay loans, this places additional stress on women.

e. Women tend to receive less pay for equivalent tasks, compared to men, although this seems to vary depending on the activity.

1.4.12 Climate Change Vulnerabilities

72. The major climate vulnerabilities in the project areas are due to floods and droughts. These are not new phenomena but the local population perceives that there is an increase in the frequency and intensity of these events, and a reduction in predictability (e.g. floods occurring at unusual times of year). These events can be extremely disruptive of agriculture activities and have the secondary effect of discouraging farmers from investing more than the minimum cost and effort in future years' crops, on the basis that the risk of crop failure is too great.

73. Local communities also reported concern at increased temperatures, particularly increased frequency of very hot days and nights during which it is not possible to remain within a house (small, metal roof houses are particularly a problem). This also causes difficulties in caring for children. Other direct climate impacts such as lightning strikes and storms are also a cause for concern.

1.5 Stakeholder Baseline Analysis

74. During the PPG phase extensive stakeholder consultations with national and sub-national government agencies, development partners, NGOs/CSOs, research bodies as well as representatives of the target groups and local organizations have taken place. The aim was to ensure a maximum fit of the project with government priorities, to capture local views and sometimes differing needs in that regard and to align and harmonize the project with the efforts of all concerned development partners. The stakeholder consultations were conducted through workshops, bilateral working sessions, field trips, one-to-one meetings with key individuals, and focused meetings with individual responsible agencies. The main stakeholder consultation events during the PPG are listed below:

a. A national inception week of the PPG phase in Phnom Penh between 31st March to 4 April, 2014;

b. Bilateral meetings with all key Government stakeholders plus a range of development partners, NGOs and private sector organizations with activities relevant to climate resilient livelihoods support (April and May 2014);

c. Consultation with Provincial, District and Commune level stakeholders, NGOs and private sector entities (finance institutions and input suppliers) as well as with local communities (19th to 24th April 2014);

d. Presentation of initial proposals to key group of government stakeholders on 26th May 2014;

e. Further fieldwork with local communities and with local level finance agents and input suppliers (June 2014);

f. Presentation of draft results framework and implementation framework to mini-workshop with key stakeholders on 7th August 2014

g. Full proposal presented to stakeholders for discussion and feedback at stakeholder workshop on 15th September 2014;

h. Presentation of final proposal to key stakeholders on November 2014.

75. The table below shows a list of stakeholders with the respective mandates as well as their potential role to influence the delivery of project outcomes, outputs and activities:

Stakeholder	Relevant Mandate	Potential Role in the Project and Rationale for Involvement
National Climate Change Committee (NCCC)	NCCC is an inter-ministerial body established in 2006 whose responsibilities include, inter alia, coordinating and cooperating with concerned ministries and institutions in the preparation of draft policies, strategies, regulations, plans and programs on climate change, and coordinating and cooperating with concerned ministries and institutions in the preparation of draft policies, strategies, regulations, plans and programs on climate change.	Strategic oversight of project implementation; the overall progress of the LDCF project will be periodically reported to this Committee.
Ministry of Environment (MoE)	MoE is responsible for coordinating government efforts on environmental issues including climate change. The Climate Change Office was established in MoE in 2003 and then upgraded to CC Department in 2009. CCD was designated as the secretariat for the NCCC. The CCD has five units: the Administration Office; the GHG Inventory and Mitigation Office, the Vulnerability and Adaptation Assessment Office; the Policy Coordination Office and the Education and Outreach Office.	Implementing partner, with project management assigned to the Climate Change Department. Coordinate project M&E Implement Output 1.4 (knowledge platform)
Climate Change Technical Team (CCTT)	Along with the NCCC, CCTT was established as an advisory body to NCCC members on climate change issues. It comprises representatives from Government ministries and agencies.	CCTT will act as the coordinating body for inputs to the project from technical Ministries (MAFF, MoWA, MoP etc)
National Committee for Sub-National Democratic Development - Secretariat	NCDD is an inter-ministerial coordination mechanism to promote the D&D reform agenda. It was established in 2008 and is chaired by the Minister of the Ministry of Interior. NCDD's primary mandate is to strengthen institutions at sub-national levels – provinces, districts/municipalities,	• Responsible Party for sub-national operations of the project: funding and technical assistance to sub-national administrations, integrated with the NP-SNDD

Stakeholder	Relevant Mandate	Potential Role in the Project and Rationale for Involvement
	and communes/sankgats. NP-SNDD was formulated by NCDD and IP3 will be executed by NCDD through its secretariat (NCDDS).	• Coordinating with Ministry of Planning on planning guidelines • Coordinating with MoWRAM on development of technical guidelines for climate proofing small-scale water infrastructure
Association of Local Councils (formerly National League of Communes/ Sangkats)	NLC/S was originally established by the UNDP/EU Democratic and Decentralized Local Governance project (DDLG 2006-2011), the predecessor of ACES project, as a membership organization that advocates for commune and sangkat council's interests to national- and provincial-level counterparts such as MoI, NCDD and provincial councils. NLC/S is currently the only local government association in Cambodia. It has representatives from all of 1,633 C/S councils and each of the 24 provinces has Capital/Provincial Associations of Communes and Sangkats. IP3 envisages that NLS/C will provide support to local councils as "autonomous governance bodies responsible for policy and decision making" supervising the local unified administrations, and promoting and coordinating democratic development. With support from the ACES project, reflecting greater inclusion and functional reassignment of district councils envisaged in IP3, NLC/S is in the process of expanding its membership to district councils, accompanied by the name change to ALC.	In the proposed LDCF project, ALC is envisaged to play a critical role to disseminate best practices and lessons learned for wider replication and expansion of project results leveraging the nation-wide membership of NLC/S. ALC will conduct awareness raising and capacity development of District and Commune Councilors for CCA, through the UNDP ACES project.
Council for Agriculture and Rural Development	Inter-sector coordination of rural development. Specific focus on social protection through the Social Protection Coordination Unit which is piloting measures including conditional cash transfers	Membership of the Steering Committee and partnership in dialogue and knowledge management; specific sharing of expertise on social protection and conditional cash transfers.
Ministry of Planning	With NCDD-S, development of sub-national planning guidelines, and management of the Commune Database (CDB) including data entry through its Provincial departments	Analysis of CDB data and preparation of maps and figures for District Vulnerability Assessment
Ministry of Agriculture, Forestry and Fisheries	MAFF consists of five departments: Agriculture, Livestock, Fisheries, Forestry, Rubber and Economic Land Concession. Representatives of the agriculture, fisheries administration, and Forest Administration (FA) are members of the CCTT. The Department of Agricultural Extension (DAE) is charged with contributing to the improvement of food security, rural income and agricultural production in Cambodia. DAE adopts and uses the participatory training and extension approach and methodology for delivering and transferring agricultural knowledge, information and technology including farming system development, farmer	• Through GDA: development of technical guidelines for climate-smart agriculture and master training of extension agents; coordination with IFAD-ASPIRE programme. • Through PDA/DAO: technical support to Outcome 2 activities through the Technical Facilitation Committees at Province and District level.

Stakeholder	Relevant Mandate	Potential Role in the Project and Rationale for Involvement
	organization development and extension and household food security. MAFF currently hosts the PMU of the first UNDP-supported LDCF project and is also an implementing entity of PPCR/SPCR in partnership with MoWRAM.	
Ministry of Water Resources and Meteorology	MoWRAM is mandated to be responsible for 1) water resources management and development; 2) flood and drought management; 3) water-related legislation and regulation; 4) water resources information management; and 5) administration, management and human resources development. MoWRAM has been maintaining, rehabilitating and developing a number of irrigation infrastructures, but in recent years, in line with the D&D reform, it is promoting irrigation management transfer and Participatory Irrigation Management and Development (PIMD). MoWRAM is a responsible party for the first UNDP-supported LDCF project and is coordinating programmes on Climate Risk Management and Rehabilitation of Small- and Medium-scale Irrigation Schemes in the Tonle Sap Basin, and on the Enhancement of Flood and Drought Management, with support from PPCR/SPCR. MoWRAM also oversees the establishment and provides technical/administrative assistance to Farmer Water User Committees (FWUCs), who in turn are responsible for community management of water resources. PDoWRAM is responsible for technical clearance of irrigation investments by SNA	• With NCDD-S, development of technical guidelines for climate resilient small-scale water management infrastructure. • Through PDoWRAM: technical support to implementation of irrigation works through the Technical Facilitation Committees at Province and District level.
Ministry of Women's Affairs and Provincial Departments of Women's Affairs	MoWA/PDoWA is responsible for promoting gender equality and empowerment of women. In the first UNDP-assisted LDCF project, MoWA is playing a critical role in ensuring that adaptation activities are gender-sensitive and integrating adequate criteria in the vulnerability assessment (VRA). Their participation in the project enabled a Rapid Gender Assessment as an integral part of the VRA and strengthened the gender aspect of the project significantly.	Ensuring that a gender perspective is integrated into the development of this climate change adaptation programme and female farmers and women headed households gain full benefit from the intervention. Through PDoWA/DOWA, support to implementation of Outcome 2 activities through the Technical Facilitation Committees at Province and District levels.
Sub-National Administrations	SNAs are divided into three tiers of sub-national administrations: Commune/Sangkat, District/Municipality, and Provincial Councils. Each of the C/S Councils, which represent the lowest tier of administration in Cambodia, consists of five to 11 members and one clerk hired by the Ministry of Interior (MoI). The councils are given a broad mandate of representing the state and addressing local needs, ranging from security and public order and basic public services to social and economic development and the environment. C/S councils are	Provincial: Coordination of technical support to the Districts and Communes through the NP-SNDD-IP3 and through the Technical Facilitation Committee District and Commune: • Preparation and implementation of District CCA plans integrated with the DDP/DIP.

Stakeholder	Relevant Mandate	Potential Role in the Project and Rationale for Involvement
	required to present their development priorities, through C/S Investment Program, in a district integration workshop. Currently there are 1,633 communes/sangkats. District and Provincial councils are elected by C/S council members. So their election is not directly by citizens. District and Provincial Governors are appointed by the MoI. IP3 explicitly states that the responsibilities of bulk of service delivery will be transferred gradually to districts while provinces build capacity for strategic planning and investments as well as provision of effective support and oversight of districts/municipalities. District-level administrations are the main target of the IP3 implementation as their functional roles and responsibilities, as well as financial autonomy, have been vague in the D&D reform process. Their capacity as a key service provider to C/S is likely to be enhanced significantly through IP3.	• Responsible, under NCDD-S, for implementation of livelihood activities (Outcome 2) and for monitoring CCA performance and meeting targets under Outcome 3. RATIONALE: Under NP-SNDD, the District level is expected to become the main level of local service provision and of support to the Communes. Implementation through the District Administrations will facilitate cross-sectoral integration of project activities. Communes: Preparation and implementation of climate change adaptation activities mainstreamed in the CDP/CIP.
Farmer Organisations	Farmer cooperatives strongly promoted by MAFF for savings, input purchase, produce marketing and coordination of extension activities Farmer Water User Communities assigned responsibilities for irrigation operation and maintenance by MoWRAM	Support to introduction of climate resilient agriculture. Establishment of local farmer-to-farmer knowledge sharing networks. Cooperative activities (input purchase, marketing, savings group etc). Maintenance of small scale water infrastructure
IFAD	Agriculture development financing focused on poor farmers worldwide. Co-finances TSSD with ADB Preparing ASPIRE which has focus on climate resilient agriculture and extension service reform.	Cooperation and parallel financing of certain activities (e.g. development of guidelines for climate resilient infrastructure; climate resilient agriculture techniques).
UNCDF	Local Development Practice area with focus on performance-based grant financing to SNA Global Local Climate Adaptive Living (LoCAL) project supports NCDD-S in implementing LGCC	Cooperation and parallel financing for improved Performance Based Climate Resilience Grant and performance measurement.
USAID	Support to Cambodia agriculture sector through HARVEST programme Global Feed the Future (FTF) programme has developed standardized monitoring tools	Shared use of the FTF Household survey instrument and shared data in Kampong Thom province (covered in USAID survey plan).
SNV	International NGO with specialist programme in climate-smart agriculture including technical experts and relevant activities in Cambodia	Technical assistance to MAFF GDA for guidelines and training materials in climate resilient agriculture given their existing partnership with MAFF GDA under the IFAD's supported programme PADEE and the organisation's international expertise in climate resilient agriculture and synergy with a multi-country Climate Smart Agriculture programme.

Stakeholder	Relevant Mandate	Potential Role in the Project and Rationale for Involvement
Local NGOs	Local NGOs are often specialized in community organization and may also implement livelihoods training activities. Some NGOs are willing to contract as service providers with projects or local government	Possible involvement as service providers (on contract basis) to District Administrations.
Finance Institutions	Many MFIs active in Cambodia and some (PRASAC, AMK, AMRET etc) have specific financial products tailored for poor and vulnerable clients. MFIs generally offer lower interest rates but more stringent conditions compared to the informal money market.	Provision of small group or individual loans to finance investments in climate resilient infrastructure activities, and possibly, handling of conditional cash transfers to poor and vulnerable women.
Private Sector	Agriculture input suppliers also provide credit (for inputs, payable at harvest) and may be involved in extension activities in partnership with major supply companies and PDA.	Possible scope for public-private partnership arrangements for extension service delivery, following existing models (e.g. GIZ – Green Belt)

2 Strategy

2.1 Project Rationale and Policy Conformity

76. The overarching project objective of strengthening the resilience of rural livelihoods is consistent with the GEF Focal Area Objectives and Outcomes on Climate Change Adaptation (CCA): 1-Reduced vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level. Relevant Focal Area Outputs with which this project is aligned is presented in the Project Results Framework in Section 3 below.

77. The development objectives of the Royal Government of Cambodia (RGC) are expressed in the "Rectangular Strategy for Growth, Employment, Equity and Efficiency" first adopted in 2005 and updated in 2013. The Rectangular Strategy is based on development in four key areas: agriculture, infrastructure, the private sector and capacity building and human resources development, while good governance is placed at the core of the strategy. The National Strategic Development Plan 2014-2018 (NSDP) elaborates the principles of the Rectangular Strategy. Both the Rectangular Strategy and the NSDP recognize the need for action to address the impacts of climate change on agriculture and on irrigation infrastructure, which are key concerns of the project. NSDP core targets that will be directly addressed by the project include reduction in the poverty rate and increases in paddy yield and irrigated area. The project also aligns with the decentralization objectives of the Rectangular Strategy and the NSDP as described below.

78. The Cambodia Climate Change Strategic Plan (CCCSP) outlines the government's vision for promoting climate-resilient development and green growth in the period 2014-23. During its first phase the CCCSP will focus on adaptation activities aimed at strengthening community resilience. All climate-related issues, including a climate change financing framework, will be gradually integrated into development strategy and planning at all levels – national and sub-national – as a matter of priority. The proposed project

responds directly to the first Goal of the CCCSP: "*Reducing vulnerability to climate change impacts of people, in particular the most vulnerable, and critical systems (natural and societal)"*[20]

79. RGC gives a high priority within the Rectangular Strategy / NSDP framework to implementation of the Policy for Promotion of Paddy Production and (milled) Rice Exports (2010). This (informally known as the Rice Policy) is an integrated, cross-sectoral strategy to return Cambodia to its former position as a major rice exporting nation, thus diversifying exports, earning foreign exchange and capturing a larger share of value-added milling, processing, packaging and branding activities. The priority measures proposed by the "Rice Policy" include improvement of extension services, promotion of improved, climate-resilient rice seed varieties, irrigation development and support to Farmer Organisations.

80. The project objectives also support the National Social Protection Strategy for the Poor and Vulnerable 2011-2015 which includes as its Objective 3 "The working-age poor and vulnerable benefit from work opportunities to secure income, food and livelihoods, while contributing to the creation of sustainable physical and social infrastructure assets."

81. MAFF has prepared a Ministerial Climate Change Action Plan which is subordinate to the CCCSP. The project responds (in part) to the first stated objective of MAFF-CCAP which is "*To ensure food security and farmers' livelihood improvement through an increase of crop production, agro-industrial at 10% per year. To enhance development, the use of appropriate technology, renewable energy, the effective us of water, adaptation and mitigation."* The LDCF project specifically supports implementation of the first stated priority action of the MAFF-CCAP: *"Promoting and up-calling sustainable farming system that resilient to climate change."* By assisting climate-vulnerable farmers to secure and improve their production the project will contribute to achievement of the goals of the RGC's flagship Policy on Paddy Production and Rice Exports, and the project also supports the MAFF priority for strengthening of farmer organisations and cooperatives in line with the Law on Agriculture Cooperatives (2013).

82. MoWRAM has developed a Climate Change Strategic Plan with 10 objectives, concerning improved protection, management and use of water resources. The LDCF project will specifically address Objective 4: "Adapt to climate change and mitigate its effects on water resources based livelihoods" as well as supporting Objective 5: "Take stronger community participation such as Farmer Water User Committee in water resources management and development to address impacts or obtain benefits from climate change induced opportunities."

83. Ministry of Women's Affairs (MoWA) has prepared a Gender and Climate Change Strategic Plan with the vision that "Women and men in Cambodia are equally empowered and resilient to climate change impacts, including natural disaster risks and impacts; they join in climate change adaptation and mitigation equally; and participate in policy-making processes to transform economies into greener ones." The MoWA plan focuses on mainstreaming gender in climate change policies and sectoral strategies, including the flagship "Neary Ratanak[21]" programme of MoWA. The LDCF project responds in particular to Strategic Objective 2: "The funding rules for gender and climate change initiatives are established and made operational through gender-responsive budget in the current and upcoming projects/programmes/policies (both external and national sources)" and Strategic Objective 6: "Effective mechanisms for scaling up the

[20] See Cambodia Climate Change Strategic Plan (English translation) Page 3, Section 4.
[21] "Women are Jewels"

proven experiences on gender and climate change are identified; lessons and best practices of gender and climate change are elicited and analysed for sharing and learning in national, regional and global forums."

84. By integrating planning of project activities with the sub-national planning process and using sub-national administrations as the coordinating and implementing agencies at local level, the project supports the process of decentralization in Cambodia and the objectives of the NP-SNDD. The key role of NCDD-S in implementing the project, in cooperation with the National Climate Change Committee, will ensure alignment with the implementing approach of the NP-SNDD IP3 and with its development partner institutions.

2.2 Country Ownership: Country Eligibility and Country Driven-ness

85. This Project Document was formulated in compliance with LDCF guidelines and aligned with the updated Results-Based Management Framework for the LDCF (GEF/LDCF.SCCF.9/Inf.4). Consistent with the Conference of Parties (COP-9), the RGC will use LDCF resources to implement priority interventions addressed in Cambodia's National Adaptation Programme of Actions, inter alia:

a. Development and Improvement of Community Irrigation Systems;

b. Promotion of Household Integrated Farming; and

c. Water Gates and Water Culverts Construction.

86. Thus, this satisfies the criteria outlined in UNFCCC Decision 7/CP.7 and GEF/C.28/18. The project requests the LDCF to finance the additional costs of achieving sustainable development imposed on the LDCF-eligible countries by the impacts of climate change. Following the NAPA formulation process, it is fully country-driven, cost-effective and focuses on the most vulnerable populations including women, the landless and farmers relying on rain-fed agriculture for their livelihoods. This approach also underpins the recognition of the linkage between adaptation and poverty reduction (GEF/C.28/18, 1(b), 29) and is aligned with the scope of expected interventions as articulated in the LDCF programming paper and decision 5/CP.9.

87. Cambodia ratified the United Nations Framework Convention on Climate Change in 1995 and acceded to Kyoto Protocol in 2002. The NAPA was approved by the RGC in 2006 which identified 39 priority adaptation projects of which 20 are considered high priorities worth $130 million. The Initial National Communications was reported in 2002 and the Second National Communications is currently in draft. The country's first overarching climate change strategy – Cambodia Climate Change Strategic Plan (CCCSP) – was signed by the Prime Minister on 31st October 2013 and covers the period 2014-2023. The plan was formulated through a cross-ministerial effort led by the National Climate Change Committee (NCCC). NCCC will have overall responsibility for the management and monitoring of CCCSP. NCCC was established in 2006, chaired by the Senior Minister of Environment and the Prime Minister was made honorary chair in 2009. It is supported by the cross-ministerial Climate Change Technical Team (CCTT) and Climate Change Department (CCD) within the MoE as the secretariat to NCCC.

88. MoE and NCCC are currently undergoing re-organisation. It is understood that NCCC is likely to be merged into a new Sustainable Development Council under MoE leadership. It is expected that the new Council will take over the strategic oversight role of NCCC once this is done. There will be no negative impact on project implementation as direct implementation responsibilities are assigned to MOE.

89. As described above, the proposed project, based on the NAPA and further designed through detailed consultations with a wide number of national stakeholders and their partners, has full country ownership and is driven by national circumstances and priorities. This multi-stakeholder process for identifying urgent and immediate adaptation priorities is reflected in the project implementation architecture.

2.3 Design Principles and Strategic Considerations

2.3.1 Overview

90. In determining the focus and approach of the proposed LDCF project, the following considerations were carefully reviewed by the RGC. Cambodia's high vulnerability to climate change has attracted a large number of donor-assisted adaptation programmes and initiatives to date. The Cambodia Climate Change Alliance (CCCA) has established itself as an effective single-platform that brings together not only different ministries but also bilateral and multilateral donors for coordinated national-level policy and institutional support. Sdupport provided includes the formulation of CCCSP, technical assistance to the cross-ministerial NCCC and Climate Change Technical Team (CCTT), and capacity development support for the Climate Change Department within MoE which acts as the secretariat to the NCCC.

91. A majority of ongoing adaptation projects assisted/financed by bilateral and multilateral donors are working directly with sectoral ministries focusing primarily on water resources, agriculture, infrastructure, fisheries, forestry and coastal areas, and hence, adaptation finance is directly channeled through off-budget sectoral allocations. Three GEF-designated agencies (UNDP, UNEP, and FAO) supported the implementation of the first three NAPA follow-up projects working under this modality. The upcoming Early Warning Systems (EWS) project is also primarily sector-focused. The largest volume of climate change linked funding is through ADB's Strategic Programme for Climate Resilience (SPCR) which has a total resource envelope of $385m. The majority of SPCR resources will be disbursed through investment projects in the water resources (2 projects), agriculture (2 projects) and infrastructure (3 projects) sectors[22]. SPCR additionally includes technical assistance for mainstreaming climate resilience into development planning at both national and sub-national levels, but to date it is not clear what activities related to sub-national planning will be supported.

92. Support provided to NGOs is less well-coordinated but various financial and technical support mechanisms exist. UNDP-led Cambodia Community Based Adaptation Programme (CCBAP) and CCCA Trust Fund facility both provide small grants to promote grass-roots level adaptation actions. A new phase of CCCA, including a modified Trust Fund, was initiated in 2014 and will be implemented by MoE-CCD during a five year period which will coincide with implementation of the LDCF project. SIDA has the Joint Climate Change Initiative that supports a group of NGOs.

93. This means that even though a considerable portion of climate change adaptation financing is allocated to community level activities, the planning of these activities largely bypasses the local development planning processes which are led by the sub-national administrations. This can lead to inappropriate, top-down planning decisions and to solutions that are not technically suitable to the local situation, as well as to missed opportunities for synergy with other development interventions in the local area. Even where the investments are technically sound and valuable, the implementation process does not systematically enhance the capacity for adaptation within local communities. The long term strategy of

[22] http://ppcrcambodia.files.wordpress.com/2012/04/srini-spcr-status-4oct12.pdf

RGC, as expressed in its Rectangular Strategy, is to progressively enhance the capacity of the sub-national administrations for local development planning and for coordination of service delivery, which by implication means that the SNA will bear a major responsibility for building climate change resilience at local level.

94. The importance of climate change adaptation as a cross-cutting issue is recognized in the NP-SNDD, and NCDD-S has undertaken a number of pilot initiatives. These include the LGCC project which piloted VRA, District Climate Resilience Strategies and Performance Based Climate Resilience Grants in eight Districts/Municipalities (financed initially by CCCA Trust Fund and in the second phase by SIDA through UNCDF's LoCAL programme), and initiation of a joint working group to integrate climate change adaptation into the sub-national planning processes, which is now receiving technical assistance from UNDP. The challenge now is to learn the lessons from these pilots (see summary below) and to demonstrate the effectiveness of sub-national planning and implementation of climate change adaptation at a larger scale.

95. Sub-national administrations suffer from severely constrained resources, so the available funding is always much less than would be needed to fully implement the development plans. Provision of resources earmarked for climate change, fully integrated into the budgets of the SNA, not only increases the size of the resource available for climate change adaptation initiatives but also strengthens the incentive for SNA to plan effectively for this purpose (i.e. the quality of planning inevitably suffers when it is clear that there will be no resources available for implementation).

96. Against this background, RGC recognizes the value of applying LDCF resources to build on the NP-SNDD and its donor-assisted implementation plan (IP3) by integrating within it an effective system of climate resilient planning, budgeting and execution through the sub-national administrations. These considerations underlie the strategic decision to include strengthening of sub-national government systems in the Objective and in Outcome 1 of the project, while sub-national administrations will play a major role in implementation of the project (particularly Output 1.1 and Outcomes 2 and 3) through an approach that is closely integrated with the NP-SNDD.

97. Cambodia is embarking on the process of formulating a National Adaptation Plan that will outline measures to strengthen the long-term adaptation capacity of the country. The strengthened sub-national, cross-sectoral capacity should be seen as a vital element of the holistic adaptation capacity of the country (Government, economy and society) together with the necessary capacity strengthening in national cross-sectoral institutions, Ministries and other sectoral agencies, civil society and the private sector.

98. Also under leadership of MoE, Cambodia is preparing a Climate Change Financing Framework in order to "establish reliable, transparent and attractive financing mechanisms to effectively implement the [Climate Change] Strategic Plan[23]." The framework includes a preference for pooled funding sources with a number of donors potentially open to this approach. Cambodia is undergoing the necessary steps to achieve readiness for direct access to the Green Climate Fund and the Adaptation Fund. Taken together these developments could provide a long-term source of finance for climate change adaptation initiatives by sub-national administrations.

[23] Ministry of Environment, press release 28/01/2014.

2.3.2 Lessons from Past / Ongoing Initiatives and Knowledge Sharing

99. The design of the project has benefited from lessons learned from ongoing projects supporting local climate change adaptation initiatives. Among the most important of these are the NAPA Follow Up project in Kratie and Preah Vihear provinces (now extended into a second phase with funding from the Government of Canada) and the CCBAP project which supports CCA interventions through local NGOs. Both projects have demonstrated success in specific technical approaches to local CCA, and both have piloted versions of the VRA process (initially developed under NAPA-FU). The project has also benefited from the experience of NCDD-S in piloting Performance Based Climate Resilience Grants for climate change adaptation investments by SNA.

100. Lessons learned from past and ongoing initiatives have been incorporated into the project design in the following ways:

a. The need for an integrated approach to planning support, including introduction and/or upgrading of planning tools to assist SNA to link identified climate change vulnerabilities to actionable plans and budgets (Output 1.1);
b. The importance of building adequate technical capacity at the sub-national level so that local CCA investments can be implemented to a high standard (Outputs 1.2 and 1.3);
c. The importance of learning, including careful measurement of results, and sharing of knowledge amongst stakeholders (Output 1.4);
d. The need to ensure that sectoral inputs are coordinated and responsive to local needs, for example by making agriculture support and irrigation investments work together (Outputs 2.1 and 2.2);
e. The need to ensure that the poorest and most vulnerable are not excluded due to their lack of economic resources (Output 2.2); and
f. The value of performance incentives, but the need to ensure that these are based on robust, objective and relevant performance measures and do not unfairly penalize the most disadvantaged SNA.

101. In addition, specific technical approaches tested and demonstrated by NAPA-FU and CCBAP will be available for application in the new project where appropriate to local needs. The proposed project will work closely to share knowledge with these projects and with other complementary initiatives, notably the ASPIRE programme of IFAD. This will be recognized by including a "knowledge platform" as a specific Output under Outcome 1 of the new project.

102. In addition to the projects that have demonstrated CCA approaches at local level but outside the local planning framework, there are a number of ongoing or foreseen initiatives that have strong potential complementary to the proposed project, that address the need to integrate CCA into sub-national planning and implementation. These are likely to include further support to NCDD-S from UNCDF's LoCAL programme, and financing of Performance Based Climate Resilience Grants under a component of ASPIRE. NCDD-S will also receive support from ADB's SPCR programme for capacity building and PBCR grants ($1.2 million for 4 Districts in Battambang and Banteay Meanchey) and a Capacity Building and Disaster Risk Reduction facility, also supported by ADB ($2.9 million for 5 provinces including Kampong Thom and Siem Reap). Coordination of these efforts through NCDD-S offers the opportunity that lessons learned and innovative approaches demonstrated, can be rapidly scaled up.

2.4 Gender and vulnerable groups

103. As described in Section 1 and in Annex 5, women in the project target area experience specific challenges in their daily lives and they are exacerbated by the effects of climate change. The needs and priorities of women, and particularly those of poor and vulnerable women, may differ from those of men. However, the roles of women and men in the local community are inter-dependent and there are few, if any, areas of social or economic activity that are purely women's concerns. Hence, the support and active participation of both sexes is needed for success in most livelihood activities. Accordingly, the project will develop a Project Gender Strategy that combines mainstreamed measures to ensure that women have equal opportunity with men to be heard, to participate and to benefit from project activities, together with measures specifically targeted to support women without overlooking the need to ensure the support and engagement of men. The Project Gender Strategy adopts a three-pronged approach that aims to ensure the meaningful participation of women, rather than mere token representation. The gender strategy focuses on (1) raising the awareness of the overall community of the differential gendered aspects of climate change; (2) ensuring and facilitating participation of women and vulnerable groups in all aspects of project implementation and (3) specific livelihoods support to poor and vulnerable women. The Ministry of Women's Affairs (MoWA) will participate in the Project Board to ensure conformance to gender mainstreaming principles, and MoWA technical representatives will also advise on ensuring gender mainstreaming in guidelines and training materials. At sub-national level the Provincial Department of Women's Affairs, the District Women's Affairs Office and the Women and Children Focal Persons of the District and Commune Councils will support gender mainstreaming and participate – in mixed teams – in climate change adaptation planning and in implementation of livelihood activities. Capacity building on gender in livelihood and CC adaptation will be provided to the project's staff, counterparts, and other involved stakeholders. Implementation of the Project Gender Strategy will be overseen by the Project Gender and Social Specialist.

104. **Awareness Raising** will be integrated into climate change adaptation planning activities and will include a specific component on the differential gendered impacts of climate change. This discussion should incorporate awareness raising on climate change, awareness of the impacts this will have on women in relation to their traditional and actual roles in production and in the household and implication of social disadvantages suffered by women including the prevalence of domestic violence. The discussion should directly encourage participants (both men and women) to take women's needs into consideration in planning and to identify activities that respond to the needs.

105. **Ensuring Participation** must go beyond simply providing "equal access in principle" and must actively address the potential obstacles to women's participation. At community level this can include addressing the time demands of child care or other domestic tasks, socio-cultural considerations and women's security concerns. At critical points in the process, notably during the VRA, women will meet separately from men as a group to determine their needs and to ensure that these needs can be adequately articulated in the broader process. Livelihood activities (including those that are not specifically targeted to women) must be designed taking into consideration any potential constraints to women's participation and how these might be overcome (for example, are there specific sub-activities within a livelihood enterprise that are perceived as requiring a man's strength to perform them? If so, how can this problem be overcome so that a woman-headed household can participate?) Wherever possible, female technical specialists (e.g. extension agents) and facilitators will assist in facilitating women's effective participation.

106. **Women's Livelihood Activities** are outlined in Section 2.6.3 below. Design of this sub-component of the project is based on the principle that specific interventions are needed to address the climate change vulnerabilities of poor women in the community, and that these interventions need to integrate technical support for livelihood enterprises that are specifically available to women with limited land, labour and capital resources, with social capital building to assist in overcoming the disadvantages these women face within the community. Although these activities will focus on groups of women, the potential need for engagement of the male members of the household in some aspects of the activities will be discussed, identified and addressed.

2.5 UNDP Comparative Advantage

107. The comparative advantage of UNDP as the Implementing Agency of the proposed LDCF project arises from its strong, multi-disciplinary country presence, a track record of engagement with the key stakeholders at policy and project levels over a long period, and institutional experience in implementing previous and ongoing projects on climate change adaptation and strengthening sub-national governance, which presents an important baseline for this project.

108. UNDP has engaged with MoE since its establishment in 1993 and was the first development partner to provide core support to policy and implementation on climate change in Cambodia since 1999. Key aspects of this support have included support to preparation of the Initial and Second National Communications to the UNFCCC, the National Capacity Self Assessment and the NAPA, support to CCCA including management of the CCCA Trust Fund; support to preparation of the CCCSP. UNDP was the first GEF designated agency to be invited by RGC to support the implementation of the LDCF financed NAPA Follow Up project "Promoting Climate-Resilient Water Management and Agricultural Practices in Rural Cambodia" (2009-2013) and the institutional review of the Ministry under the new government mandate. Another LDCF financed project focusing on strengthening climate risk information management is expected to start in 2015. These two LDCF projects, in particular, place UNDP in a strategic position to seamlessly integrate lessons into the implementation of the proposed LDCF project. UNDP's engagement in these key climate change adaptation projects and programmes has built a strong foundation for cooperation and partnership with MoE-CCD and other key stakeholders.

109. In the area of local governance support, UNDP also has a long history of engagement with and support to decentralization initiatives in Cambodia, reaching back to the launch of the Seila Programme in 1996 with support from the CARERE2 project. UNDP provided technical assistance for development of key policies and legislation and provided assistance through a number of project facilities. Most recently, UNDP has provided technical assistance for enhancing the use of data (e.g. the MDG Scorecards) in the sub-national planning system. UNDP is also providing ongoing support to NCDDS for climate change adaptation in local planning, including technical assistance for mainstreaming climate change in the formal planning guidelines as well as support to climate vulnerabilities (the "Scale-Up" project). Through NAPA-FU, UNDP is supporting improved technical guidelines for climate resilient irrigation, which will be of great utility to the new project.

110. UNDP also supports capacity development of the District and Commune Councils through the Local Council Association (formerly the National League of Communes and Sangkats). Having received initial support from an EU-UNDP supported programme - the Democratic and Decentralised Local Governance in 2006-2011 - this organization will increasingly take responsibility for all aspects of capacity development for elected councilors. UNDP's Association of Councils Enhanced Services Project (ACES) is designed to

turn the LCA into an effective network and representative in advocating for the common interests of the local councils and citizens.

111. Finally, UNDP's role as the coordinating agency for the United Nations Country Team (UNCT) in Cambodia and its strong knowledge management capacities lend it an advantage in ensuring the effective learning of lessons and sharing of knowledge in local climate change adaptation initiatives and mainstreaming of climate change in local development planning.

2.6 Project Objective, Outcomes, Outputs and Activities

2.6.1. Project Objective

112. The Project Objective is **"Sub-national administration systems affecting investments in rural livelihoods are improved through climate sensitive planning, budgeting and execution."** The objective reflects the strategic perception that the capacity of sub-national governments to support and provide services for climate change adaptation is an important pre-condition for sustainable improvements in resilience at the levels of communities, community assets (e.g. irrigation systems) and individual households.

2.6.2. Project Outcome 1: Climate sensitive planning, budgeting and execution at the sub-national level strengthened

Co-Financing Sources for Outcome 1	**Amount**
NCDD-S (IP-3)	1,744,000
SNA (D/M Fund and C/S Fund)	4,653,720
UNDP	960,000
Total Co-Financing	**7,357,720**

LCDF Grant Request: US$ 1,071,350

Baseline:

113. As described in Section 1, Cambodia has a well-established system of sub-national, participatory development planning as a result of the RGC's longstanding commitment for bringing the government closer to people and through corresponding donor support in this area, most notably the Seila Programme which was supported by UNDP through the CARERE (1996-2000), PLG (2001-06) and PSDD (2007-11) projects. The spirit for strengthened sub-national planning capacity is now taken over by the national NP-SNDD and its IP3[24], as well as the UNDP-supported ACES project.

114. The formulation of the five-year Commune Development Plans and annual Investment Programme is based on a bottom-up process featuring annual meetings in each village. Planning meetings are facilitated and supported by two groups: the Planning and Commune Support Units (housed within and financed by the general budget of the District Administration) and the Provincial Planning and Investment Division. Formally, responsibility for support to District and Commune level development planning is assigned to the former. However, they comprise 2-3 junior civil servants and due to their limited capacity, in reality, the latter provides considerable amount of support during the planning process. The IP3 programme provides additional financial support, particularly for travel costs, and technical support and capacity

[24] The three-year implementation plan of the National Programme for Sub-National Democratic Development

development through its network of advisors, posted at Province and District level. The IP3 advisory team consists of advisors specializing in planning, capacity building, public financial management, IT and others, and there are currently around 300 such advisors contracted to NCDD-S and deployed across all provinces/districts. With support from these groups, the Commune Development Plan is drafted by an inclusive Commune Planning and Budgeting Committee.

115. The IP3 advisory team assists the Provincial Administration to plan, manage and support the planning process and in training and backstopping of the facilitators Integration between planning at the different levels is achieved through a District/Municipality Integration Workshop (and the more recently established Provincial Consultation Workshop), where development priorities from the Communes within the district are aligned with district-level resources available through State technical agencies and non-governmental actors.

116. Past development assistance in strengthening sub-national level development planning has also given rise to several development databases which principally assist sub-national administrations during the development planning process. The Commune Database (CDB), hosted by the Ministry of Planning, is a comprehensive annual survey of basic socio-economic data collected at village, commune and district levels. The CDB generates the Commune Profile which is a summary of data for the commune. The MDG Scorecards estimating achievement of key MDG indicators for local areas, developed with technical assistance from UNDP, are also based on CDB data. A separate Commune Development Planning Database (CDPD) records the outcomes of the District/Municipal Integration Process and tracks cooperation agreements between the Communes and implementing agencies. With support from advisors described above, these databases are used as a planning tool at the commune and district level.

117. Recently, several donor-assisted initiatives began introducing the concept of mainstreaming climate change adaptation into the sub-national development planning process. Notable initiatives include NAPA-FU project (the first LDCF-financed project), LGCC, UNDP-CCBAP and the current UNDP Scale Up project. The former three jointly pioneered a design and application of VRA as part of the commune development planning process. LGCC introduced a District Climate Resilience Strategy prepared jointly by Commune and District representatives based on VRA results, which was then used to allocate the Performance Based Climate Resilience Grant resources to projects. However, these tools have been applied only in limited pilot areas so far. UNDP-CCBAP project is also supporting a review and revision of the existing (unofficial) guidelines for VRA while the UNDP Scale-Up project is providing technical assistance to NCDDS for developing an outline procedure for CCA mainstreaming into the sub-national planning.

118. Through these initiatives, sub-national planning process is slowly transforming itself as a more inclusive, transparent, and more recently, climate-sensitive process. The outcome of such planning process is presented in the Commune Development Plans and annual Investment Programme. However, the progress is undermined by systemic weaknesses in the execution of these Plans and Programmes. For example, while small scale water management infrastructure investments are a frequently identified priority within these plans and represent the second largest (after road infrastructure) volume of investments under the Commune/Sangkat Fund (CSF), adherence to the design standard applied is uneven. Moreover, there are no specific technical guidelines for climate-resilient infrastructure (though NAPA-FU is developing some training materials). Technical support for small-scale water management infrastructure (and other infrastructure needed to support climate resilient livelihoods, which may include flood-proofed roads and flood refuges for people and livestock) is organized through Provincial technical departments and through

the Technical Support Officials who provide design and construction services for CSF 'projects[25]'. The system as it exists is adequate for design of small infrastructure where no technical complexities exist; however the capacity to recognize complexity and adapt designs accordingly is very limited. Scheme-level design of irrigation is a particular weakness. Construction supervision is also weak and may be influenced by collusion between contractors, supervisors and project owners. NCDD-S has experimented with using privately contracted technicians (for example in LGCC and in the TSSD project) but while this approach has merits, it has not solved all the problems. Technical staff have little or no formal training in the challenges posed by climate change or in how to address these challenges in technical design. Therefore, identification of climate adaptive water management priorities through local planning does not necessarily lead to effective implementation.

119. Another example of weak execution capacity can be found in the area of agriculture support. Despite the importance of smallholder agriculture to the local economy, provision of extension services is driven by funding availability through externally assisted projects and NGOs. As a result, coordination of extension with other development activities that may have been identified in the local development plan is weak and most farmers do not have consistent access to quality advice services. Extension is often centred on production technologies for staple foods; these technologies may be outdated or otherwise inappropriate to local needs. The extension approach often involves teacher-centred learning and may be organized without sufficient regard to competing time demands of the target farmers. Ongoing initiatives including the IFAD ASPIRE programme (nationally) and the ADB/IFAD TSSD (in the LDCF project target areas) aim to address the general weaknesses of the extension service and improve overall capacity. There have been a number of initiatives to integrate climate resilient agriculture technique into extension but the benefits of these initiatives are not widely available to climate-vulnerable farmers.

120. Much of the work that has been done to date on mainstreaming climate change adaptation in local development planning has been at the level of small scale or localized projects. A variety of planning tools, or variations on tools such as VRA, have been developed. However, less effort has been devoted to robust, cross-comparable measurement of results, or to sharing of knowledge gained. Despite the volume of activity and the range of approaches, there is rather little convincing evidence in the public domain of which approaches are most likely to be successful. Livelihood support programmes may often be based on simplistic assumptions about Cambodian rural economy and society that do not take sufficient regard of rapid changes in recent years, while the "climate change" label is attached to business-as-usual approaches.

121. With support from the CCCA, MoE is working on development of standardized vulnerability indicators and will also develop knowledge management and sharing capacity for climate change adaptation at national level. Other relevant efforts to strengthen knowledge management include introduction by USAID of a standardized household survey tool under its Feed the Future Programme, which includes much of the household level data needed to measure changes in vulnerability and resilience at the household level, and the establishment under the ASPIRE programme of a facility for field-testing and evaluation of promising climate resilient agriculture technologies. However, these knowledge management efforts do not specifically address the need, within the context of sub-national local development planning and budget execution, and delivery of services in support of resilient livelihoods, to ensure that results are measured,

[25] Essentially, these "projects" are individual priority action items identified in the Commune Development Plans and Investment Programmes.

lessons learned successes – or failures – are well substantiated by evidence and that the resulting knowledge is shared amongst the development community.

Additionality:

122. MoE will use LDCF resources to strengthen effective mainstreaming of climate change adaptation into local development plans, budgets and execution arrangements while building knowledge base of climate change adaptation efforts at the sub-national level. This will be achieved by building upon the baseline initiatives aiming at strengthening sub-national level development planning process, namely the support architecture established within the National Programme for Sub-National Democratic Development (NP-SNDD), the DMF which currently finances the Planning and Commune Support Units, and the UNDP-supported ACES project. Sub-national administrations in the target Districts and Communes will be assisted to effectively identify climate change vulnerabilities and challenges and prioritize adaptation actions as part of the existing development planning process. The existing level of climate-sensitive development planning – pilot tested in less than 5% of the total Communes – will be expanded to an additional 89 Communes. Furthermore, the quality of the planning process will be improved through the introduction of more objective vulnerability data – data that already exist within various institutions but currently underutilized or not synthesized for the specific purpose of sub-national planning. They include agricultural census data, ID-Poor information, local topographic information, livelihood patterns, etc. At the same time, the capacity of technical staff responsible for supporting implementation of the development priorities will be strengthened through introduction of specific technical approaches in climate resilient agriculture and small scale water management. The benefits of these efforts will be extended beyond the target Districts through robust, quantitative measurement of results achieved and through sharing knowledge stakeholders by using the network of Commune Councils supported by the ACES project and through a Knowledge Platform established within the context of the overall knowledge management role of MoE-CCD.

123. Outcome 1 will be achieved through the following four Outputs focused on development planning, technical capacity for agriculture support, technical capacity for small scale water management and knowledge management and sharing.

Output 1.1: Capacity of sub-national councils (communes and districts) and Planning and Commune Support Units in two provinces enhanced for climate sensitive development planning and budgeting

124. The starting point for strengthening climate sensitive planning will be the guidelines currently being prepared by NCDD-S and the Joint Working Group with support from UNDP-Scale Up Project. The draft of these guidelines focuses on use of vulnerability mapping and consideration of climate change vulnerabilities at each step of the planning process. The guidelines will also institutionalize the role of VRA as a tool for assessing local climate change vulnerabilities and responses. With the guidelines in place there is a need to support the actual rollout, hence the LDCF resources will operationalize these guidelines with a possibility of refining them during the course of the project implementation based on the experience from the field application. An enhanced methodology for VRA (which includes a rapid gender assessment) has been developed under CCBAP and will be applied in at least 50 additional Communes. Moreover, the quality of Commune-level planning process will be enhanced through a set of assessment on vulnerability conducted at the district level to guide planning outcomes (see more on District Vulnerability Assessment

below). The result will be climate-sensitive local development plans that conform to the existing guidelines but are improved in quality and effective application of guidelines.

125. The District Councilors do not directly participate in administration activities but represent democratic accountability in the system and are ultimately responsible for approval of the development plan, investment program and budget. The Commune Councilors combine democratic accountability with a direct administrative role. Therefore the essential first step is that the councilors must understand the nature of the climate change challenge and the framework for climate change adaptation at local level. MoE-CCD will work with the UNDP-ACES project on climate change awareness training for Councilors which will be delivered through the Association of Local Councils.

126. Gender mainstreaming in climate sensitive planning will also be improved. Previously, gender assessment was used within VRA more for raising awareness about differential impact of climate change on men and women than as a planning tool. With LDCF resources, local planners will be trained to better facilitate the development planning process so that some of the priority actions identified explicitly address women and other vulnerable groups' concerns in the context of climate change and livelihoods. Suitable training materials have been developed by MoWA and they will use the materials to train planners within SNAs as well as Planning and Commune Support Units and IP3/DA advisors who support SNAs.

127. MoWA will assist in reviewing the VRA approach which at a minimum should include the following features:

- Separate meetings with women to ensure their issues and needs are raised;
- Scheduling meetings for compatibility with other demands on women's time, and providing for care of children so that women can fully participate;
- Ensuring that the women' ideas and needs are considered for local development plans and investment program.

128. Data analysis and vulnerability mapping will be consolidated in a District Vulnerability Assessment (DVA). This will be based on analysis of existing data sets including the Commune Database (CDB); ID-Poor and the recently completed Agriculture Census, plus available topography, soil type and climate data. Hands-on trainings on the assessment will be carried out targeting district level officers in the first year of project implementation and will result in a set of maps, one for each target district, showing areas and populations that are particularly vulnerable to climate change. The DVA will also produce District and Commune CC vulnerability scorecards, following the model of the MDG scorecards developed by Ministry of Planning with UNDP support.

129. Through climate sensitive planning, each District will prepare a District Climate Change Adaptation Plan. In principle, this will identify a three-year work plan for livelihood support and infrastructure investments, which can be consolidated into the District Investment Program. Livelihoods and infrastructure investments will be identified and matched with anticipated resources (including project funds and counterpart funds such as the CSF and DMF) over a three-year period. The work plan will be developed as an annex to the standard format of the Investment Programmes but will also be integrated in the body of the Investment Programme. The content of the work plan will include (1) identification of the most vulnerable communities that will receive resilient livelihoods support; (2) identification of suitable resilient livelihood activities based on a gender-sensitive Farmer Needs Assessment (this will be based on but go further than the VRA by taking into account the outcomes of a DVA); (3) identification of priority

complementary investments in irrigation and other infrastructure contributing to climate resilient livelihoods and (4) a provisional allocation of resources for a three-year period.

130. The District Climate Change Adaptation Plan will be the basis for planning of small scale water infrastructure and livelihoods activities contributing to Outcome 2 of the LDCF project. Annually, the Communes and the District will review and update the plan in line with the annual update of the DIP and preparation of the CIP.

131. Figure 2 below shows the sequence of project activities, in line with the existing planning process at the Commune and District levels.

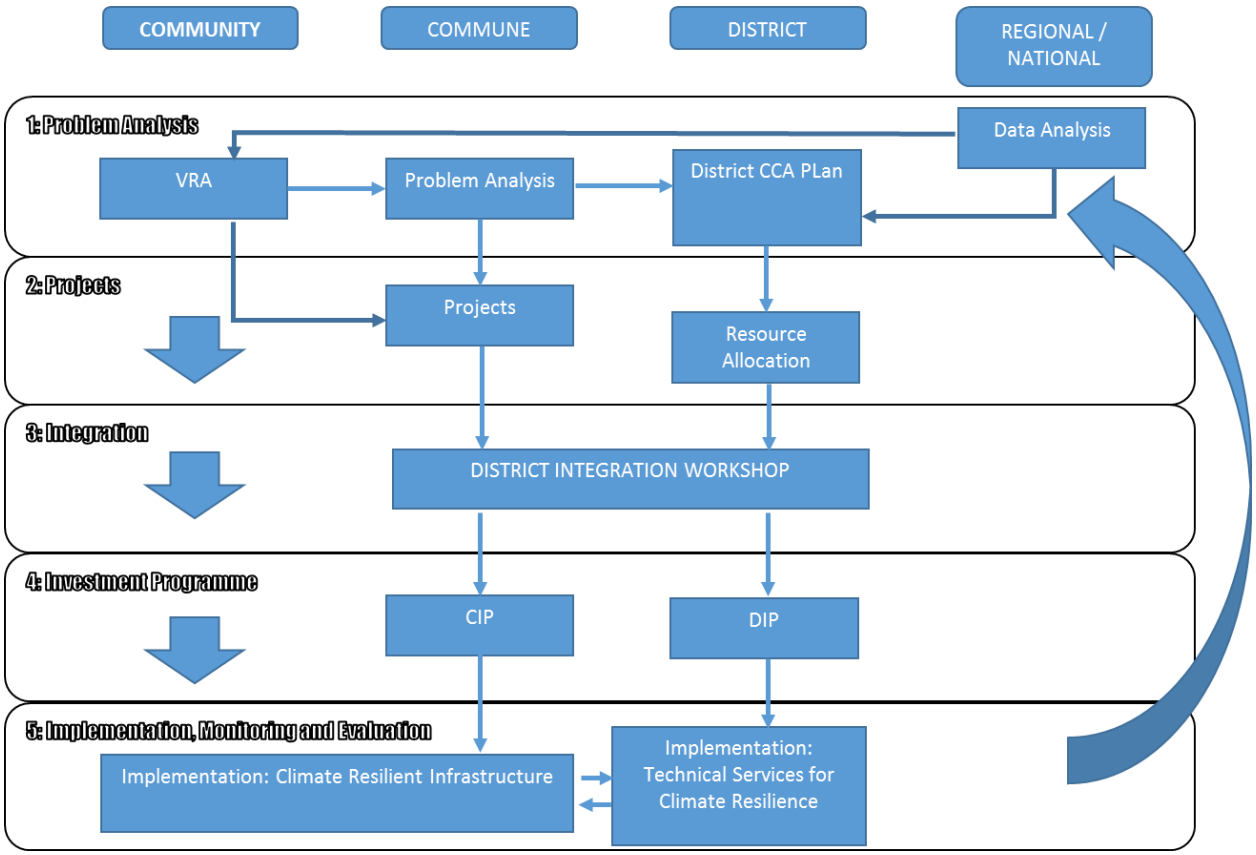

Figure 2: Mainstreaming CCA in the 5-Step Local Development Planning Process

132. The results of the DVA and the VRA will be integrated into the appropriate steps of the planning processes at District and Commune levels, following the outline procedures in the formal guidelines. The first year of the project will occur in the second year of the five-year District Development Plans and the fourth year of the Commune development plans. For this reason, the project will support a revision of the District Development Plan in the first year and mainstreaming of CCA in the new Commune Development plans in its second year. At a minimum, each participating SNA will include in its development plan a climate change adaptation strategy that identifies (1) key vulnerabilities; (2) most vulnerable communities; (3) priority adaptation actions and (4) criteria for prioritizing adaptation interventions.

133. Output 1.1 will be implemented through the institutions responsible for local development planning and, in particular, with technical support through the Planning and Commune Support Units of the District Administration. At the same time, these units will receive general capacity development assistance under

the IP3 (within NCDD-S) and specific capacity development for climate sensitive planning under Outcome 3 of the LDCF project. In this way, achievement of Output 1.1 will contribute to sustainable enhanced capacity. Experience and lessons learned will contribute to improved knowledge that will be and thus to national dialogue and formulation of improved policy and regulations for sub-national planning.

134. Output 1.1 will be achieved through the following key activities:

1.1.1. Climate Change Awareness Training of Sub-National Councilors. This training will be delivered through the Association of Local Councils with support from the UNDP-ACES project.

1.1.2. Training on gender mainstreaming in sub-national climate change adaptation.

1.1.3. Preparation of the DVA including GIS-based vulnerability maps and vulnerability scorecards and associated hands-on trainings targeting the Planning and Commune Support Unit at the district level.

1.1.4. Organizing Provincial CCA Planning Workshop in each Province, at the beginning of the project and annually thereafter for setting the framework for CCA planning at District and Commune level and extending knowledge and lessons learned to representatives of Districts and technical agencies that are not directly involved in project implementation.

1.1.5. Initial CCA Planning Meeting in each District. The project will start work in four Districts (i.e. two per Province) in the first year and a further six Districts in the second year. At the initial meeting, the DVA will be presented and participants will identify in outline the key localities for the focus of project efforts.

1.1.6. Administration of Vulnerability Reduction Analysis (VRA) in selected villages in vulnerable areas of each District[26] (up to 6 villages per Commune in at least 50 of the 89 Communes in the 10 Districts).

1.1.7. Technical assistance targeting Commune Planning and Budgeting Committee to review the results of the VRA, identify priority actions, including livelihood support and infrastructure investments, responding to the key climate change vulnerabilities, and integrate climate change adaptation actions into the Commune Investment Programme.

1.1.8. Technical assistance targeting the District Technical Facilitation Committee to formulate District Climate Change Adaptation Action Plan

Output 1.2: Technical capacity of agricultural extension officers and grass-roots NGOs enhanced for climate-resilient livelihood techniques and sustainable assistance to communities

135. Technical assistance on climate resilient agriculture will be financed by LDCF resources to support the Ministry of Agriculture, Forestry and Fisheries. Although the development of training curricula and master training will be conducted at national level, the work will be closely guided by a Training Needs Assessment which will make use of the outcomes of the VRA. This Output will also be closely integrated with development of improved extension materials supported by the IFAD PADEE and ASPIRE projects and will both support and benefit from a facility for testing innovations in climate resilient agriculture under ASPIRE.

136. Technical capacity to implement development activities in support of rural livelihoods will be strengthened by ensuring that existing best practice approaches are identified and new approaches

[26] Carrying out a VRA does not necessarily mean that a village will be the target for livelihood support activities: the results of the VRA will be taken to represent the overall pattern of vulnerabilities and priority responses at the level of the Commune and the District.

developed where necessary, and by ensuring that technicians (extension agents and engineering technicians) from a range of different institutional backgrounds receive an appropriate mixture of theoretical training and hands-on experience. Proper identification of farmers' needs and of local technical constraints through improved climate change adaptation planning methods at local level will form an important part of this capacity development effort. Assisting farmers to make the optimal decisions from the range of crop and technology options available to them, can be as important as the introduction of new techniques in strengthening the climate resilience of agriculture livelihoods. This insight will be incorporated into the training materials and especially into the farmer needs assessment, as well as in modules addressing specific crop production and marketing.

137. Training packages developed will focus specifically on the needs of farmers practicing rain-fed rice-based agriculture, and in particular on assisting these farmers to maximize efficiency of use of water resources consisting of seasonal rains plus supplementary irrigation (i.e. the expected situation of farmers in the target area who benefit from infrastructure investments under Output 2.2). The training materials will take into account the specific situation of farmers in the target areas as identified during the project preparation and confirmed by the training needs assessment. The approach is likely to be based on the Climate Change Resilient Cropping Systems approach developed by ACIAR and can accommodate introduction of integrated farming, SRI, seed purification, selection and delivery of seed varieties (drought/flood tolerant varieties and varieties with longer photoperiod), optimization of fertilizer use, on-farm water management techniques, improved harvest and post-harvest technology, marketing and diversified livestock rearing. All technologies will be selected for resilience and sustainability in view of available water supplies (taking into account any improvements in water supplies to be achieved through infrastructure investments).

138. Extension materials and training methods will emphasize visual aids and field demonstrations and will be designed to meet the needs of trainees who are likely to have only limited literacy. Extension materials will be designed to facilitate the equal participation of women. Where appropriate, trainings will address the issues of gender roles and gender inequality directly.

139. Output 1.2 will be achieved through the following key activities conducted by GDA with additional technical assistance:

1.2.1. Training Needs Assessment and identification of climate resilient agriculture technologies;

1.2.2. Development of methodology for Farmer Needs Assessment. This will be designed to help smallholder farmers to identify the livelihood improvements that are most relevant to their situation and to make optimum decisions from the options open to them, particularly taking into account seasonal water availability (including the possibility of improved irrigation infrastructure).

1.2.3. Development of extension packages for climate resilient agriculture. These may involve production of new extension materials or updates to existing materials. There will be opportunities for mutual support and cost-sharing with the ongoing IFAD projects. All extension packages will be designed for a farmer-centred learning approach that does not rely excessively on classroom teaching or make unnecessary demands on farmers' time. Farm business planning, calculation of expenditures and income, post harvest and marketing will be incorporated in each package.

1.2.4. Validation Workshop. The Farmer Needs Assessment methodology and extension packages will be reviewed by a stakeholder workshop and any necessary modifications identified before finalization of the training materials.

1.2.5. Master Training. The trainings in use of the new packages will be conducted by MAFF-GDA and will take place at MAFF training facilities with facilities for demonstration of techniques. The trainees will be selected from the target Provinces. It is expected that the trainees will consist of a mixed group including officials of PDA/DAO, NGO extension agents and private sector agents (i.e. extension agents individually contracted to support project activities and (if feasible) extension agents employed by private sector entities such as input supply companies).

1.2.6. Qualitative review of applied trainings/extension to assess the efficiency and effectiveness of the innovations in farmer extension services related to climate change resilience and identify problems and opportunities for improvement. The findings of the review will be used for making changes during project implementation and also to learn lessons for future policies and programs. The review will provide an evaluation of the technical quality of the on and off farm applied trainings (targeting, pedagogical approach, materials, relevance of topics covered, likely impact on adoption, etc) and suggest areas for improvement. The review will consist of interviews and/or focus group discussions with trainers in the project, as well as at sub-national level, MAFF staff and individual beneficiaries, as well as observation of a random number (small).

1.2.7. Recommendations for Innovative Technologies Requiring Field Testing. This activity will be carried out in collaboration with the Innovations for Climate Resilient Agriculture component of IFAD's ASPIRE program by identifying and recommending suitable climate resilient agriculture technologies for testing under field conditions. Testing will then be carried out by farmers in the ASPIRE provinces. Results measurement is included in the ASPIRE activities and the results will be shared by the two projects.

Output 1.3: Technical capacity to execute climate resilient water infrastructure design and construction enhanced for about 50 Government technical officials and private contractors

140. LDCF resources will be used to support development of guidelines for climate resilient small scale water management infrastructure. This effort will build on two tracks of baseline work: First, the existing NCDD-S technical standards for small-scale infrastructure including irrigation design, which currently do not incorporate climate risks such as increased runoff or extreme events; second the training manual for climate-resilient small-scale infrastructure design, developed with support from the first LDCF-financed project. While the latter integrates climate change concerns, the manual is somewhat general as the former, the official technical standards, remained unrevised during the lifetime of the project. Thus, with the new LDCF support, these two tracks of work will be brought together so that the official technical standards are revised with climate change concerns and the training manual will be revised to fully correspond to the revision of the standards. Attentions will also be paid to building the national capacity to use such standards. As discussed in the barrier section, the level of compliance to the existing standards is variable partially due to the lack of capacity among Technical Support Officials (TSOs) within SNAs, PDoWRAM officers, and private contractors[27] to adhere to them. Thus, LDCF contribution will be both towards the development

[27] Whether TSO, PDoWRAM and private contractor will be responsible for design and construction of rural irrigations work as well as the supervision depends on the nature, size and budget of the work.

of improved design standards as well as the necessary capacity enhancement of individuals/institutions by whom the standards are to be used.

141. This work will work will be done in partnership with the IFAD ASPIRE programme which envisages providing technical support to NCDD-S in this area. Development of technical standards will be carried out by an expert consultant who will work closely with NCDD-S and with MoWRAM. Training will follow a learning-by-doing modality in which a mixed group of trainees including PDoWRAM staff, TSOs and private sector technicians will undergo a mixture of classroom training and field experience on selected example irrigation schemes. Therefore, training will take place over an extended period following the scheme identification, feasibility study, scheme and technical design and construction phases of the example projects.

142. Training materials for climate resilient water infrastructure will address gender concerns including the water needs of activities that are conducted primarily by women (e.g. home gardening) and will include consideration of the potentially different ways in which women and men are affected by different types of water infrastructure investment.

143. It is important to note that activities under Output 1.2 and 1.3 are supported and implemented in an integrated manner so that sub-national planners understand the linkage between improved capacity for executing climate resilient agricultural extension services and small-scale water infrastructure construction. It is expected, by the end of the project, that previously fragmented support on agriculture and water access will be brought together in the platform of sub-national development planning.

144. Output 1.3 will be achieved through the following key activities:

1.3.1. Identify and agree with MoWRAM suitable standards for construction of small-scale climate resilient infrastructure;

1.3.2. Design of training course in climate resilient small-scale irrigation and agreement of contents between NCDD-S and MoWRAM;

1.3.3. Revise the existing training manual developed by the first LDCF-financed project to specifically align with the new standards;

1.3.4. Stakeholder workshop to validate the standards and training materials;

1.3.5. Selection of suitable example schemes from amongst those supported under Outcome 3;

1.3.6. Initial classroom training followed by phased on-the-job training based on phases of development of the example schemes and obtaining feedback (including individual skills and knowledge assessment) at each stage of the training.

Output 1.4: Knowledge management platform for sub-national Climate Change Adaptation Planning and resilient livelihoods support established

145. Knowledge Management will be strengthened through integrating a strong focus on sub-national climate change adaptation into the climate change knowledge platform being established at MOE-CCDD. LDCF resources will be used to ensure sound quantitative and qualitative substantiation of project impacts and inclusive sharing of knowledge. In particular, this will strengthen the linkages between the fields of livelihoods development, decentralization and climate change adaptation overseen by the NCCC.

146. The Knowledge Management Platform will be based on knowledge sharing between stakeholders including the members of the Climate Change Technical Team, the Joint Working Group on Mainstreaming Climate Change Adaptation and Disaster Risk Reduction in Sub-National Planning, and the donor coordinating group on climate change. Knowledge management expertise and resources will be shared with the CCCA and with other programmes working in the fields of sub-national climate change adaptation and resilient livelihoods support, notably the ASPIRE programme of IFAD.

147. The Platform will ensure that results of sub-national climate change adaptation and livelihoods support are measured and documented, that lessons are learned and shared amongst a community of stakeholders and that innovative approaches and methodologies can be discussed, prototyped and potentially connected to sources of funding. To this end, LDCF resources will be used to finance data collection, field studies, cross-study visits with other projects, technical meetings and seminars, and for publication of knowledge products in multi-media formats, together with associated technical assistance costs.

148. Output 1.4 will be achieved through the following key activities:

1.4.1 Establishment of a statistically valid impact measurement system based on a controlled household survey;

1.4.2 Qualitative monitoring of project impacts which should include assessment of the differential impacts on women and on men;

1.4.3 Assessment of lessons learned and preparation of knowledge products (progress summaries, case studies, policy briefs, reports) in multi-media formats suitable for web-based publication;

1.4.4 Knowledge sharing events (seminars, workshops and study visits); and

1.4.5 Institutionalization of the Knowledge Management Platform, through (a) finalizing the TOR and membership; (b) email/website-based dialogue and knowledge sharing among members as well as organization of dialogue events such as seminars and (c) standardization of reporting of key indicators of sub-national climate change adaptation interventions and results achieved.

2.6.3. Project Outcome 2: Resilience of livelihoods for the most vulnerable improved against erratic rainfalls, floods and droughts

Co-Financing Source	**Amount**
SNA (D/M Fund and C/S Fund)	6,512,850
UNDP	135,000
Total Co-Financing	**6,647,850**

LDCF Grant Request: US$ 3,056,400

Baseline:

149. Despite the increasing importance of wage labour in the rural economy, the majority of Cambodian rural households, including those in the target Districts, remain dependent on agriculture and agriculture-linked activities as the basis of their livelihoods and food security. Rice production is the basis of most smallholder agriculture and is predominantly a single, rain-fed, wet season crop. Vegetable production, livestock raising and aquaculture are also important activities and are generally integrated with the rice

production cycle. However, for land-poor households these latter activities may assume an even greater importance as rice production is not an option for them.

150. Farmers in the target Districts face major challenges in sustaining agriculture-based livelihoods at above poverty levels. These challenges are exacerbated by climate events including floods and droughts which, although always a feature of the Cambodian climate, are projected to be becoming both more severe and less predictable in timing and by additional impacts from high temperatures, including reduced yields of traditional crops and increased morbidity from human and animal diseases. Increased rainstorm intensities and flood flows may also exacerbate a problem of soil erosion and nutrient loss. This problem is said to be particularly severe in Banteay Meanchey Province but is likely to also affect Siem Reap.

151. Floods, droughts and erratic rainfall pose especially severe problems for farmers growing rain-fed wet season rice supplemented by very low-technology approaches to vegetable and livestock production. The rice production cycle is highly dependent on the predictability of weather patterns. Much of the annual rainfall, particularly early in the wet season, is not used for cropping because of the risk of drought in mid-season, hence, many farmers wait until the middle of the wet season to plant, but are then at risk of crop loss through floods which mainly occur late in the season. Agriculture techniques are changing in response to markets and to the increased cost/value of labour, but farmers have little training or experience in the new techniques and may apply them inefficiently or be unaware of long term risks, for example from high-yielding but disease-prone rice varieties or from crops, such as cassava, that rapidly deplete soil fertility. Nevertheless there are opportunities as well as threats – there is scope for improved livelihoods based on available technologies, particularly through improved management of water resources, introduction of climate resilient crop varieties, and adjustments to traditional techniques and cropping patterns.

152. In the majority of rice-growing areas, irrigation infrastructure is either absent, derelict or at best, inadequate. In many systems, scheme design faults can be traced to constructions undertaken in the Khmer Rouge period (1975-79), while lack of adequate control structures and distribution networks lead to uneven coverage and inefficient water management. Small improvements in irrigation infrastructure can provide great benefits in terms of security of access to water during dry spells, allowing farmers to plan with confidence and invest in additional inputs such as improved seeds and fertilisers, secure from the threat of crop loss due to flood or drought. Enabling production of an early wet season crop (either rice or an alternative field crop) can be particularly advantageous as this still leaves time for a main wet season crop and the early wet season is not normally subject to major flood risks.

153. Women in rural communities face additional challenges due to changing social and economic activity patterns and due to climate change. In particular, poor women household heads are amongst the most vulnerable members of the community and typically suffer from the additional disadvantage of limited education and low social status. There are also many women who face the challenge of maintaining the household, caring for dependents and carrying on agriculture activities in the absence of able-bodied men and younger, single women household members who have migrated to seek work. The poorest and most vulnerable women typically lack land for extensive crop production and may lack sufficient labour power to produce rice and other field crops unaided. The challenges faced by poor and vulnerable women are multi-dimensional and require an integrated response.

154. Services to support agricultural livelihoods are provided from a number of sources. Provincial Department of Agriculture / District Agriculture Office (PDA/DAO), Provincial Department of Water Resources and Meteorology (PDoWRAM), and sub-national administrations (SNAs) are key public service

providers, within the context of maintaining agricultural livelihoods. PDA/DAO/PDoWRAM operate through sectorally allocated budgets from their respective Ministries. On the other hand, SNAs rely on discretionary budget allocations of DMF and CSF for districts and communes, respectively, to coordinate with local technical agencies (e.g. PDA/DAO/PDoWRAM) and to finance priority actions identified in local development plans. Non-government agencies such as NGOs, farmer organisations and private sector entities such as agriculture input suppliers are also increasingly bridging the gap of public service delivery shortfalls. However there is a general problem of coordination among these different agencies, severe funding constraints, and technical capacities of service providers, as described in more details below.

155. DAO are district sub-entities of PDA and generally have between two and five staff in each District, one of whom is typically an extension specialist. However DAO receive effectively no operational funds from the core National Budget allocation of MAFF and are able to deliver extension services effectively only when supported by an external assistance project. There are significant weaknesses in the capacity of PDA and DAO to plan and deliver effective, demand-responsive extension services. In the longer term, the IFAD ASPIRE programme is designed to help MAFF to overcome these weaknesses but currently, there is only limited capacity within PDA/DAO to address climate change issues systematically or to promote climate resilient agriculture solutions.

156. Similarly, PDoWRAM generally lack budgets for irrigation development and also face constraints on their technical capacity. PDoWRAM do not currently use technical guidelines or training materials that specifically address climate change adaptation and climate-proofing of small scale water management infrastructure.

157. SNAs (District and Commune Councils) prepare Development Plans and Investment Programmes which include priorities for infrastructure development and livelihoods support. However, the resources of the DMF and CSF are not sufficient to implement more than a small portion of the identified priorities. Currently, the DMF provides around $40,000/district/year (or less than $1 per capita) for development investments, and CSF at, on average, $20,000 per Commune (or less than $2.5 per capita). Despite the severe limitation in the availability of these funds, District and Commune councils regularly invest them in irrigation developments and in other types of water management infrastructure (drainage, flood protection, small scale reservoir storage etc). These schemes are developed from the priority needs of local farmers and from perceived opportunities, for example, to rehabilitate a dis-used canal or to improve distribution from a main canal or other source. However, DMF and CSF irrigation developments typically suffer from two major constraints: first, lack of adequate technical capacity for design and construction (see the baseline section for Outcome 1), and second, severe shortage of funds, resulting in an imperative to "stretch" resources as far as possible at the expense of technical quality and of expensive but essential features such as concrete water control structures. Furthermore, it is only rarely that agriculture extension services are available to assist farmers to take best advantage of improved access to irrigation provided by DMF and CSF investments.

158. The Technical Facilitation Committees (TFCs) are established under the mandate of the SNA to coordinate between the SNA and the technical departments, and to ensure that the technical capacity of the departments can be deployed in support of executing sub-national priorities. However, the actual functioning of the TFC remains weak and largely limited to inputs to the planning process itself (see Annex 3).

159. In eight of the ten target Districts, the ADB/IFAD TSSD project is currently supporting selected Communes with additional funds and technical assistance for infrastructure investments, as well as supporting Livelihood Improvement Groups (see below under Output 2.2). The TSSD project does not include a specific focus on climate change or on ensuring climate resilience in either agriculture techniques or infrastructure.

160. In theory, farmers can access credit from a range of private providers such as MFIs and agricultural input providers to strengthen the viability of rural livelihoods but access is unequal and costs of credit are typically high. Interest rates offered by MFI are generally around 3% per month, while interest rates or equivalent credit charges paid to input suppliers are in the range of 5% - 10% per month. These borrowing costs are high enough to make borrowing to invest in some types of production uneconomic.

161. Community based organisations are present in the target Districts but are typically weak and insufficient to assist farmers to meet the challenge of climate change and support to such organisations is fragmentary. Farmer cooperatives are strongly promoted by MAFF and PDA, while MoWRAM assigns responsibility for management and maintenance of small-scale or tertiary level irrigation infrastructure to Farmer Water User Communities. However, both these types of farmer organization suffer from capacity problems and there is an additional coordination problem: ideally, one farmer organization should be able to undertake both co-operative and irrigation management functions to maximize the co-benefits from these two areas of work. As yet, farmer organisations are not a specific locus for raising awareness of climate change threats or disseminating climate resilient agriculture or water management techniques. Poor and vulnerable women may be excluded from or unable to fully participate in the existing CBO.

162. NGOs are acting as an important player to make up the public service delivery shortfalls in rural Cambodia. Oxfam and iDE Cambodia are two international NGOs that are providing a series of agricultural support services such as SRI and farm business advisory services through a network of trained local farmers. 56 local NGOs have been awarded small grants of up to $50,000 from the CCCA Trust Fund facility, and most of the grants so far are reported to be spent on irrigation related purposes (rehabilitation, extension of earthen canals, or construction of spillways) or more general livelihood support such as purchase of fish for integrated cultivation or propagation of SRI.

163. In summary, agriculture based livelihoods in rural Cambodia suffer from severe shortage of production support and services from public entities, both materially and technically, as well as from non-government organizations such as CSOs, NGOs and private companies. Additional threats from climate change are expected to exacerbate the existing challenges surrounding rural agriculture-based livelihoods. The NP-SNDD and the financing of the SNA through the DMF and CSF provides a baseline financing, though inadequate, for implementation of priority investments and services. The nature of the climate change threat requires coordinated action in the two key sectors of agriculture and water resources management, which is not provided under present arrangements. Lastly, any intervention supporting agriculture based livelihoods must take into consideration the important role that wage labour, and particularly, migratory wage labour, has in the livelihoods of the poor and vulnerable in the target Districts.

Additionality:

164. LDCF funds will be used to strengthen resilience of livelihoods for the most vulnerable against erratic rainfalls, floods and droughts through investments in climate resilient small-scale water infrastructure and complementary measures to support agriculture livelihoods. Although these are structured as two outputs, delivery will be closely integrated based on the outcome of local climate change adaptation planning

(Outcome 1) and on the coordinating role of the sub-national administrations at District and Commune levels. The ongoing (and future) public investments at the sub-national level, through DMF and CSF, on these two sectors in the target areas forms the baseline investments for this Component.

165. Output 2.1 (Climate resilient small-scale water infrastructure) will add value to the investments of the Communes in irrigation and related water infrastructure, by financing the additional costs of climate-proofing, enhanced design and construction standards and climate-resilient operation and maintenance arrangements in schemes in areas specifically identified as vulnerable to climate change impacts. Output 2.2 (Climate resilient livelihood measures) will support introduction of climate-resilient agriculture techniques, with priority given to those farmers benefitting from increased water availability in Output 2.1. Output 2.2 will also address the special needs of poor and vulnerable women through additional measures supporting agriculture-based livelihood activities that do not require large amounts of land.

166. This Outcome will be achieved by building upon the existing capacity for agriculture livelihoods support at Province and District level, as well as upon the specific enhancements to climate adaptation technical capacity created under Outcome 1. While delivery will be through the District and Commune administrations, technical capacity will be accessed through the existing mechanism of the Technical Facilitation Committee (TFC), which exists to coordinate the activities of technical departments with the Provincial and District Councils. This mechanism will facilitate mobilization not only of the key technical skills of the PDA/DAO and the PDoWRAM, but, importantly, the Provincial Departments and District Offices of Women's Affairs (PDoWA/ DOWA) and other technical agencies as needed. The activities of the different technical agencies will be coordinated through a unified work plan and budget of the TFC.

Output 2.1: Climate-resilient small-scale water infrastructure designed and put in place in 10 districts following the resilient design standards specifically targeting rain-fed farmers

167. LDCF funds will co-finance investments in production-linked small-scale water infrastructure that are selected from the Commune Investment Programmes and for which base costs are financed by the CSF. The project, supported by the District and Commune administrations, will ensure that climate-resilient technical standards developed under Output 1.3 are applied (including paying the additional cost of climate-proofing), to overcome technical capacity difficulties, support farmer organizations for management of infrastructure and capture synergies with agriculture support provided under Output 2.2

168. The expected benefit from the Output 2.1 investments is a sustainable increase in farm income based on climate-resilient water management for agriculture. This will be achieved by prioritizing small scale irrigation investments that improve availability and efficient management of water for wet season cropping, particularly to provide irrigation for short dry periods that occur predominantly in the early and middle wet season. Expected immediate benefits from such investments include (1) allowing farmers to grow rice during the early wet season, avoiding flood risk; (2) through removing the risk of crop loss due to drought, encourage farmers to invest in additional inputs and improved production techniques; and (3) potentially to move from production of a single rice crop to either a double rice crop or a rice crop plus a second cash crop.

169. Scheme identification will be based on the climate change-mainstreamed local development planning process and on selection criteria reflecting climate change vulnerability. Scheme design will be carried out in a participatory manner involving beneficiary farmers who will become members of the Farmer Water User Community. Technical design will follow the guidelines for climate resilient small scale infrastructure developed under Outcome 1.

170. In order to ensure that LDCF resources are used explicitly to strengthen the baseline investments committed by the District or Commune administrations while building on the existing planning and budgeting process rather than creating a parallel process, the decision of allocating LDCF resources will be made at a workshop attended by Commune and District representatives and will be confirmed by the District Council. To ensure consistency with prior pilot tests that have tested a similar approach, especially LGCC supported by NCDD-S and UNCDF, LDCF resources allocated through this process will be called the District Performance Based Climate Resilience Grant (PBCRG). The process will follow the following steps:

i. District Council allocates funds to priority projects proposed (with co-financing pledges) by the Commune Councils;
ii. NCDD-S checks and approves the District PBCRG Work Plan and that minimum access conditions have been met;
iii. NCDD-S transfers funds to MEF together with an instruction detailing the accounts and the amounts (in Cambodian riel) to be transferred;
iv. In parallel, the District and Commune budgets are amended to reflect the allocation of PBCRG for the coming year

171. Support to Farmer Water User Communities (FWUC) will ensure that sustainable operation and maintenance arrangements for the schemes are in place, but will go beyond the "baseline" of the standard FWUC activities and will seek to develop the FWUC into an effective farmer organization capable of raising awareness of climate change challenges and adaptive responses amongst its members, and of organizing cooperative production, marketing and / or credit activities amongst its members. This is likely to involve the FWUC having a dual identity as an agriculture cooperative. This idea has been raised with representatives of MAFF and MoWRAM during stakeholder discussions and has received a positive response, but more work will be needed to determine the details. The members of the FWUC will also be priority beneficiaries of climate resilient agriculture extension under Output 2.2. Support to FWUC will include encouraging women's full and active participation including in leadership positions and assisting the FWUC to consider gender impacts in the planning of its activities.

172. Output 2.1 will be achieved by implementation of the following activities:

2.1.1 Allocation of the PBCRG, following the steps described above, to priority schemes identified in the District Climate Change Adaptation Plan and confirmed as priorities for CSF financing by the Communes.

2.1.2 Recruitment of a local NGO that will be responsible to support FWUC organization and scheme design. The NGO will be recruited by the District Council following the procedures of the District Project Implementation Manual prepared by NCDD-S. The NGO will recruit a Technical Support Consultant with appropriate technical skills and who will participate in training on climate resilient infrastructure.

2.1.3 Initial steps in FWUC formation, and participatory scheme design. This should ensure that the farmers' local knowledge is integrated into the scheme design (i.e. layout of canals, structures etc. and intended functioning of the scheme) and also that farmers understand what benefits they can expect from the scheme. Farmer responsibilities to contribute to operation and maintenance costs should be clearly agreed at this stage.

2.1.4 Technical design of the scheme, led by the Technical Support Consultant, who will cooperate with the TSO and with the PDoWRAM.

2.1.5 Technical review of the scheme design by a technical working group under the Technical Facilitation Committee. This will ensure that the scheme and technical design are reviewed both by PDoWRAM and by PDA and will also facilitate the mandatory requirement of technical clearance by PDoWRAM (for irrigation schemes);

2.1.6 Procurement and implementation of the scheme under CSF PIM arrangements, with the TSC responsible for technical supervision. The Provincial Technical Committee conducts quality assurance checks prior to approval of the final payment to the contractor.

2.1.7 FWUC formation follows the standard steps under the leadership of PDoWRAM, but also involving staff of other key line offices, in particular, DAO and District Office of Women's Affairs;

2.1.8 The local NGO carries out capacity development of the FWUC including leadership training, climate change awareness training and support in developing its climate change adaptation plan. This support is integrated with development of agriculture activities under Output 2.2.

Output 2.2: Climate-resilient livelihood measures demonstrated in 10 districts targeting landless women and farmers practicing rain-fed agriculture

173. LDCF funds will be used to support selected groups of climate-vulnerable smallholder and landless farmers to participate in training on climate-resilient agriculture livelihood techniques, together with associated activities designed to assist the farmers to adopt these techniques. Detailed planning of Output 2.2 activities will be based on climate resilient local development planning (Outcome 1) and on a participatory farmer needs assessment. Output 2.2 will assist farmers to make efficient use of existing water resources and improved access to water resulting from the investments under Output 2.1.

174. The expected benefit of Output 2.2 is a sustainable increase in income from agriculture and closely linked activities, based on application of climate-resilient improved techniques. This will be achieved largely through (1) supporting rain-fed farmers to increase rice production and crop security using better soil conservation and management, on-farm water management, crop planning, selection of improved seed varieties, appropriate fertilizer application, pest management and other techniques applicable to the particular circumstances, with an emphasis on maximizing efficient use of available water resources and improved access to water resulting from Output 2.1 investments; and (2) supporting poor and vulnerable women to adopt or improve climate-resilient agricultural livelihood activities that do not require large amounts of land or labour, for example vegetable gardening, small livestock raising, mushroom growing and possibly some processing and / or marketing type activities.

175. The design of these investments recognizes the specific vulnerabilities of women in relation to climate change challenges and also the need to ensure that the poorest, most vulnerable and particularly, landless or land-poor households are not excluded from the project benefits by a sole focus on field crops. Therefore, LDCF resources will be used to support two distinct sub-groups of farmers, first, poor and vulnerable women who lack access to land, and second, vulnerable commercial smallholders (women and men) with access to sufficient land to grow a field crop for sale.

176. Due to multifaceted development and climate change challenges that poor women face, LDCF resources will be used to support an integrated set of activities designed to assist them, including building of social capital through group formation, institution of a group savings scheme, leadership and financial

literacy training, and small conditional cash transfers designed to reward investment in livelihood activities and offset the cost of interest arising from borrowing for working capital or in-kind credit for inputs.

177. Selection of communities for livelihood activities will be based on the climate resilient planning (Outcome 1) which will identify vulnerable communities and priority needs. Farmers benefitting from water infrastructure investments (Output 2.1) will be a high priority for rain-fed agriculture activities in the second and third years. In the first year, selection should identify communities where there is potential to improve production based on existing water supplies. This could include beneficiaries of recently completed Commune investments in irrigation financed by CSF or by the TSSD project.

178. Farmer Needs Assessment including an analysis of climate vulnerabilities, an analysis of access to water including rainfall patterns, local resources such as canals and reservoirs, and identification of suitable training topics, will be conducted in the beneficiary communities before the final selection of beneficiaries. Then, from amongst those farmers meeting the basic criteria for participation, priority will be given to selecting beneficiaries who are committed to investing time and resources in learning and adopting new or improved agriculture livelihood techniques. Beneficiary selection must not become a mechanical exercise in wealth ranking or a similar approach – experience shows that this results in selecting beneficiaries for whom the project activities are not compatible with their existing livelihoods and work patterns.

179. The District Administration will execute the livelihood activities and engage the services of technical staff from Provincial and District technical agencies through a consolidated work plan of the District Technical Facilitation Committee (TFC). The Provincial TFC will provide backup and support. This arrangement will allow coordination between technical agencies. Agriculture training will be delivered mainly by officials of the DAO, supported by the DOWA for the poor and vulnerable women's groups, but coordination through the TFC will allow the possibility of suitable officials from other agencies to participate. All trainers will be required to participate in the Training of Trainers for climate resilient agriculture (Output 1.2).

180. The District Administration will engage the services of a local NGO to support group formation and training, particularly for the poor and vulnerable women's groups. It is expected that this will be the same NGO that supports FWUC under Output 2.1.

181. The activities supporting Women's Livelihood Groups will consist of:

2.2.1 Farmer Needs Assessment identifying climate vulnerabilities, assessing resources including water resources available to the target group, identifying livelihood opportunities and selecting the training topic;

2.2.2 Group formation and skills development. Formation of the Women's Livelihood Groups will be based on the process used by NCDD-S for formation of Livelihood Improvement Groups (following the TSSD project) but there will be less emphasis on selection based on poverty ranking and more on voluntary self-selection based on interest to engage in and commit to the livelihood activities. A total of 160 groups will be formed (i.e. about 16 per District in each of 10 Districts). Each group will consist of approximately 25 women.

2.2.3 Selection of climate-resilient livelihood activity and training. The group will select from a menu of livelihood activities based on suitability to local circumstances, access to product markets and interest of the group members. Each group will participate in one training module in the first year and a second, shorter module in the second year.

2.2.4 Group Savings Scheme. Each group will form a savings scheme in cooperation with an MFI that is active in the area. Initially this will involve a joint deposit account managed by the group members followed subsequently by disbursing loans according to rules and conditions agreed within the group. The project will explore whether, and how, membership in the savings scheme can be leveraged to gain improved access to microfinance credit for the group members. The group may engage in other types of cooperative action, for example in purchase of inputs for the livelihood activity or in marketing of the products.

2.2.5 Conditional Cash Transfers. The purpose of conditional cash transfers is to offset the cost and risk to poor households (i.e. those with ID-Poor cards) of investing in the start-up costs of a climate resilient livelihood activity. Group members will be expected to demonstrate that they have invested significant resources (own labour, agriculture inputs) in the livelihood activity that was the subject of the training. Verification of this will trigger the cash transfer to the group member, which will at least cover the interest cost of the loan. The size of the conditional cash transfer is provisionally set at $25 per ID-Poor card holding member in each of two agriculture seasons. Operation of the scheme will draw upon the design and implementation lessons learned from the Cash Transfer Operational Research (CT-OR) programme implemented under CARD in cooperation with NCDD-S[28].

182. It is important to note that the cash transfer approach is aimed at covering the actual costs of starting climate-resilient livelihood activities, initially paid for by the beneficiaries themselves, and hence, enhancing the ownership and sustainability of investments. This approach is distinct from prompting beneficiaries into doing something that they are not committed in doing otherwise, as their commitments to supporting climate-resilient livelihood activities need to be revealed through their participation in Livelihood Investment Groups. It is expected that this approach will prevent the perception that the support provided with the LDCF funds is a handout.

183. Women and men vulnerable commercial smallholders who have access to sufficient land to produce a field crop (most usually, a rain-fed rice crop) and market a significant surplus, will participate in demonstrations and training of climate-resilient agriculture. Priority will be given to farmers with between 0.5-2.0ha of rice land, though this will not be a rigid requirement (the possibility of land-poor households renting land to produce a crop should also be recognized). Unlike the Women's Livelihood Groups, the focus will be on training in production and marketing technique and LDCF resources will only finance material inputs that are directly necessary to support the training.

184. The content of training will be based on climate resilient agriculture extension modules developed under Output 1.2 but will be adjusted to the local situation and the needs of the farmers as determined in the Farmer Needs Assessment. The approach will be flexible enough to combine the most appropriate elements to suit local needs and market conditions. The approach is likely to be based on the Climate Change Resilient Cropping Systems approach developed by ACIAR and can accommodate introduction of integrated farming, SRI, seed purification, selection and delivery of seed varieties (drought/flood tolerant varieties and varieties with longer photoperiod), optimization of fertilizer use, on-farm water management

[28] CARD (2013): Design Proposal on Cash Transfer Operational Research Pilot for Pregnant Women and Young Children. Features of the CT-OR scheme which would be highly relevant include the use of local authorities to validate fulfilment of conditions for payment, and use of either field agents of an MFI or the telephone banking service "Wing" to make payments to beneficiaries.

techniques, improved harvest and post-harvest technology, marketing and diversified livestock rearing. All technologies will be selected for resilience and sustainability in view of available water supplies (taking into account any improvements in water supplies to be achieved through infrastructure investments).

185. The detailed activities in support of rain-fed agriculture will be:

2.2.6 Farmer Needs Assessment. Following the methodology developed under Output 1.2, the target village will undertake a participatory Farmer Needs Assessment which will include assessment of seasonal water availability, present cropping patterns, market opportunities and will assist the farmers to identify (from a menu of options) the most appropriate Climate Resilient Agriculture technology for their situation.

2.2.7 Smallholder Learning Group (SLG) formation and training plan. A total of 160 groups will be formed (i.e. average 16 groups in each of 10 Districts). The size of the group should be around 25 farmers. The group members will have a short orientation and will then discuss among themselves on the training topic (from a suitable menu) and on organization of the training (timing of training sessions, location of demonstration plots, use of the subsidy for training inputs etc).

2.2.8 Climate Resilient Agriculture training will be delivered through a modified Farmer Field School approach with about 10 training sessions spaced at roughly two-week intervals over the growing season. The intensity of training may be adjusted according to the needs of the crop cycle. The primary training method will be hands-on demonstration in a plot or plots owned by the group members. Classroom style training will be used but will occupy a minority of the training time. A second, less intensive training module will be provided in Year 2.

2.2.9 SLGs will receive follow-up visits from the extension agent to review their progress and advise them how to adapt the techniques to the needs of their own plot. There will also be group follow-up activities including a Farmer Field Day and discussion of opportunities for group action, for example in purchasing production inputs or marketing of produce.

186. LDCF resources will also support community and cooperative action by farmer organizations (FO). Priority will be given to developing cooperative production, processing, marketing or credit activities based on the FWUC supported under Output 2.1. A fundamental part of the approach is that the farmer groups will be assisted to identify real opportunities to gain through cooperative activity which may vary according to local circumstances and market conditions. Activities include:

2.2.10 Formation and registration of agriculture cooperatives under MAFF guidelines (NB: This may involve a single group of farmers with a single leadership taking the functions of both an FWUC and an Agriculture Cooperative, as noted above);

2.2.11 Development of a climate resilient business plan for the FO;

2.2.12 Support to farmer field days, cross-visits and other activities to assist farmers to share knowledge and skills.

2.6.4. Project Outcome 3: Enabling environment is enhanced at sub-national level to attract and manage greater volume of climate change adaptation finance for building resilience of rural livelihoods

Co-Financing Source	Amount
NCDD-S (IP-3)	436,000
SNA (D/M Fund and C/S Fund)	1,163,430
UNDP	255,000
Total Co-Financing	**1,854,430**

LDCF Grant Request: US$ 230,000

Baseline:

187. Sub-national administrations (SNAs) face a severe shortage of development resources which is exacerbated by the open-ended nature of their development plans. SNAs have very limited capacity either to raise revenues locally (they have no tax-raising powers and other types of own source revenue, for rural Districts and Communes, are insignificant) and to mobilise external support. Various types of earmarked support can be used to finance activities within the local development plans but this is dependent on allocations from projects or NGO programmes that are outside the influence of the SNAs themselves. Therefore, the only development resource that SNAs consistently receive and can apply to development planning priorities are the general fiscal transfers for development through the Commune/Sangkat Fund (CSF) and the District/Municipality Fund (DMF). Currently, the size of the CSF allocation for development is equivalent to about US$2.50 per capita annually, while the DMF is less than US$1.00 per capita. Faced with many competing priorities and severe constraints in their technical and administrative capacity, the SNAs allocate the bulk of these funds to small scale infrastructure projects, primarily rural roads with irrigation investments being the second largest category. Appropriations for social projects or "services" are very small. Although this pattern attracts a considerable amount of negative comment, there is logic in the Communes' decision-making as infrastructure, particularly roads, are a real need and produce a visible output that spreads benefits fairly widely, while "road projects" present the SNAs with relatively limited technical and administrative problems.

188. The CSF and DMF are formula-based discretionary transfers that do not include any performance element (or effective minimum access conditions). The concept of access related to minimum performance was embedded in the original design of the CSF but was never applied: SNA performance (or lack of it) in one year has no influence on the allocation received in subsequent years.

189. The NCDD-S pilot of earmarked CCA financing through Performance Based Climate Resilience Grants (PBCRG) has benefited only 8 Districts through LGCC (with a further 5 targeted in 2015 under the UNDP Scale Up project) and has distributed financing to about 50 communes. Progress has been made in allocating these District-level funds through an approach that creates incentives for CCA performance, but more work needs to be done on making this system fully effective. Needed improvements include better performance measurement to align incentives with effective CCA action and with capacity developed. The LGCC pilot measured District performance against a standardized set of indicators (rather than individually set targets) and used the resulting scores as a basis for allocating shares of a single "performance pot" of finance. It is not clear that this system is the most effective in helping the SNAs understand the link between their achievements and future finance. The system is also open to the general criticism of performance

based grant systems, that the most disadvantaged local administrations (i.e. often poorer, more remote Districts with lower administrative capacity) are unfairly penalized.

190. Other project funds (notably the IFAD ASPIRE programme), will also finance PBCRG in other provinces. All the projects have a common interest in developing a unified and improved approach to performance assessment and it is expected that NCDD-S will have some resources available for this purpose (other than the LDCF resources) in 2015.

191. The recently adopted Cambodia Climate Change Financing Framework (CCFF) includes recommendations to increase access by SNA to climate change funds. These recommendations include clarification of responsibilities, strengthening CCA in sub-national planning, capacity development and tracking of CCA expenditures. The possibility is foreseen that the SNA may access CCA financing through the Sub-National Investment Fund (SNIF) currently being designed with technical assistance from ADB. However the SNIF will not begin operations until 2016 at earliest and committed funding is so far quite small, so it may be several years at least before the SNIF becomes a significant factor in CCA financing at the sub-national level.

192. Sub-national administrations suffer from general lack of capacity and this affects their ability to mobilize finance for climate change adaptation and to manage finance that is available. Potential donors are reluctant to provide finance because of the limited management capacity. Under the NP-SNDD and its IP-3 financing, NCDD-S is addressing the general problem of weak administrative capacity. However, the IP-3 provisions do not address specific needs related to climate change adaptation, particularly the capacity to self-monitor and report against indicators of climate change adaptation performance.

Additionality:

193. LDCF resources will be used to enhance an enabling environment at sub-national level to attract and manage greater volume of climate change adaptation finance for building resilience of rural livelihoods. This will be done by supporting the development (with cooperation from other programmes) of an improved performance assessment and incentive system for climate change adaptation performance by SNAs, based on the PBCRG model. LCDF resources will also support annual performance measurement in the 10 target Districts, and capacity development for the District Administrations and their Planning and Commune Support Units, specifically to assist them to assess and improve their own performance in climate change adaptation.

194. The corollary of the SNA's demonstrated preference (rightly or wrongly) for using discretionary funds to invest in infrastructure, is that additional funds for infrastructure investment are highly valued. Therefore, the prospect of additional funds for irrigation infrastructure may, at this stage, represent a more effective incentive than an equivalent amount in funds earmarked for non-infrastructure activities. This, together with practical considerations of project design and management, underlies the decision to use LDCF resources to co-finance infrastructure investments through the PBCRG mechanism (Output 2.1).

Output 3.1: Performance-based adaptation financing mechanism is strengthened and applied in 10 districts covering 89 communes and integrated into the enhanced climate-smart development planning

195. With LDCF resource, the IP in a close partnership with NCDD-S will enhance the existing system of incentives for SNAs to improve their performance in executing climate change adaptation priority actions (focus of Outcome 2) that are developed through a participatory planning process (focus of Outcome 1).

LDCF support will also be used to test and demonstrate the effectiveness of this system in the 10 target Districts. Through the knowledge platform (Output 1.4) the results will support wider adoption of the system and mobilization of additional resources for sub-national climate change adaptation.

196. More specifically, over and above the achievement of the prior pilot test of LGCC, the contributions of LDCF support will include (1) linking performance measurement to success in allocating funds to investments that support identified most vulnerable communities and that are identified as priorities in the local climate sensitive planning (Outcome 1); (2) rewarding success in linking infrastructure investments to livelihood support (Outcome 2); (3) introducing an improved performance measurement system based on the Balanced Scorecard model (see box); (4) measuring citizens' satisfaction (key to the "client" quadrant of the Balanced Scorecard) using an adapted format of the Citizens' Scorecard being piloted by NCDD-S for social services; and (5) setting for each District specific performance targets and a specific increment of funds that can be accessed through meeting the targets.

197. The improvements in the performance assessment and associated allocation of the PBCRG will specifically seek to ensure that the most disadvantaged Districts (i.e. often poorer, more remote Districts with lower administrative capacity) are not unfairly penalized.

Balanced Scorecard is a strategic planning and management system used extensively by businesses, government and NGOs all over the world. Key features of the Balanced Scorecard are (1) Indicators link performance to a strategic vision; (2) Indicators measure a number of different areas or "perspectives"; and (3) There are a small number of indicators for each area. In the general model, the four quadrants are labelled "Results and Impact", "Clients"; "Internal Process" and "Learning and Development" respectively.

The "scorecard" below indicates how the model can be adapted to evaluate the performance of an SNA in climate change adaptation. Setting clear and verifiable targets for improved performance is a key aspect.

Results and Impact 25%	**Beneficiaries** 25%
Indicators of results achieved by investments in climate change adaptation. Initially, these would probably be indicators of quality of sub-projects • Relevance of sub-projects to climate change • Technical quality • Sustainability	Measuring effectiveness at reaching poor and vulnerable smallholders • Number of poor and vulnerable beneficiaries • Beneficiary satisfaction measured by Citizens'Scorecard
Internal Process 25%	**Learning and Development** 25%
E.G indicators of quality of planning process, procurement, timeliness of implementation	Evidence of increased understanding of the challenge of climate change and of adaptation strategies.

198. Lessons from this process will be captured and disseminated through the knowledge platform established under Output 1.4 as well as through the network of SNAs supported by UNDP ACES project. It is expected that by the end of the project, LDCF resources will have accumulated practical lessens from a significantly larger number of Districts and Communes (compared with what has been covered in the

prior pilot test) so that the Government of Cambodia, and NCDD-S in particular, will have sufficient evidence base to determine the feasibility of scaling the incentive mechanism to the rest of the country.

199. Activities under Output 3.1 will consist of:

3.1.1 Improved design of Minimum Access Conditions and Performance Measurement System. The Performance Measurement System will be based on a Climate Change Adaptation Performance Scorecard described above.

3.1.2 Baseline Performance Assessment and Performance Target Setting. The NCDD-S team will work with the District to set realistic targets for each quadrant in the Performance Scorecard and overall. This system will allow achievement of locally determined priorities to be taken into account and will also avoid penalizing Districts with low initial capacity (often the poorest and most vulnerable Districts).

3.1.3 Performance Measurement will be carried out annually. The performance measurement system will rely on self-reporting by the Districts with a verification check carried out by the performance assessment team organized by NCDD-S.

Output 3.2: Capacity of Districts for self-monitoring of climate change adaptation and resilient livelihood support enhanced

200. Complementary to Output 3.1, LDCF financing will also be used to assist the Districts to monitor and evaluate their own performance and to identify actions necessary to strengthen their performance and to achieve performance targets.

201. Technical assistance will be provided through a Provincial Project Adviser who will be integrated with the NCDD-S IP-3 team at Provincial level. The principle role of the Project Adviser will be to support the Districts to develop their capacity for climate change adaptation. Self-assessment using the performance indicators will be used as a basic tool to assist the Districts to understand the goals of CCA capacity development and to systematically address areas of weakness.

202. LDCF resources will also support workshops and other events for reflection on the outcome of performance assessments and for developing action plans to achieve performance targets.

203. Activities under Output 3.2 will include:

3.2.1 Internal review of the results of performance assessment and development of an action plan to ensure that targets area achieved;

3.2.2 Self-monitoring to ensure that the District is on track to achieve its targets;

3.2.3 Participatory evaluations of infrastructure and livelihood activities;

3.2.4 Annual reflection workshops;

3.2.5 Support and backstopping from the Provincial Project Adviser.

2.7 Key Indicators, Risks and Assumptions

2.7.1 Selection of Key Indicators

204. The Project Results Framework in Section 3 details indicators, baseline, targets and sources of verification at the Objective and Outcome levels. Project risks are summarized in a Table at the end of this section and are detailed in Annex 14.

205. At the level of the Project Objective, two indicators have been selected for the Project Objective. These correspond to the elements of Impact and Sustainability in the UNDP Monitoring Framework for Climate Change Adaptation

- **Impact:** % increase in income from agriculture and linked activities of target smallholder households. This increase in income will arise from the combined effect of the project interventions in climate resilient agriculture, farmer organizations and infrastructure. Income will be measured using the major impact survey. Impact will be measured separately for poor and vulnerable women, for vulnerable commercial smallholders and for beneficiaries of infrastructure investments (who are not also participants in training).
- **Sustainability:** Number of Districts and Communes integrating CCA in their development plans and investment programs following NCDDS guidelines. This is taken as a proxy indicator of the enhanced capacity of the sub-national administrations to continue to support interventions to reduce vulnerability in the future.

206. It is important to note that additional two elements of Coverage and Replicability will be monitored throughout the implementation phase of the project. Coverage will be assessed through the number of smallholder households with reduced vulnerability. It is assumed that all households participating directly in project activities or benefitting from improved infrastructure will experience reduced vulnerability as a result, i.e. this is a measure of the number of direct beneficiaries and does not attempt to measure the scale of reduction in vulnerability. Replicability will be assessed through the number of lessons learned codified and published in knowledge products. It is assumed that lessons learned through implementation of the project and robustly evaluated through the knowledge platform activities will be capable of replication in other areas of Cambodia.

207. There are two indicators selected to measure achievement of Outcome 1: Climate sensitive planning, budgeting and execution at the sub-national level strengthened

- # District and Commune Investment Programs that include specific budgets for adaptation actions
- Number of engineers and technicians (public sector, private sector and civil society) trained in delivery of climate resilient water infrastructure;

208. For Outcome 2: Resilience of livelihoods for the most vulnerable improved against erratic rainfalls, floods and droughts, the first indicator measures the number of climate resilient infrastructure schemes supported by PBCRG. The second indicator measures adoption rates for resilient livelihood measures.

- # Resilient infrastructure measures introduced to prevent economic loss and co-financed by Commune/Sangkat Fund
- Indicator: % of targeted households (gender disaggregated) that have adopted resilient livelihoods under existing and projected climate change

209. For Outcome 3: Incentive mechanism is in place at sub-national level to manage greater volume of climate change adaptation financing aligned with local development plans, the indicator measures the success of the project in introducing an improved system of performance measurement and performance based grant financing.

- Fiscal incentive structure that incorporates adaptation as climate change risk management (i.e Performance Measurement for PBCRG) successfully introduced.

2.7.2 Risks

210. The following table lists the risks identified in the Results Framework together with appropriate measures put in place to minimize the risk to achievement of the project objective. A full Risk Log is provided as Annex 14.

#	Description of the risk and Potential Consequence	***Countermeasures / management response***	Type	Probability	***Owner***
Project Objective Risks					
1	Large scale climate resilience building investments, such as SPCR, channeled through sectoral budget allocation, undermine the incentives for climate resilient planning perceived by SNAs *Potential Consequence: Climate resilience planning is not effective because of insufficient engagement (i.e. plans would be prepared as per guidelines but quality would be weak)*	The ongoing influx of climate adaptation financing, especially prominent in the last three years, is channeled largely through sectoral ministries, and the potential volume of financing is significantly larger than the available discretionary budgets to which SNAs have currently access. If these "sectoral" investment programmes work in the same districts as the proposed LDCF project, it is possible that the incentive grant that will be introduced, in the tune of $40,000 per district per year, may be dwarfed by the volume of such investments, potentially undermining the perception of the need for integrating the genuine development/adaptation needs of local communities. To avoid this, the selection of the project target sites under the LDCF project have been selected to avoid areas that are targeted under large scale "sectoral" programmes. For example, Provinces selected for the pilot phase of the IFAD ASPIRE programme were specifically excluded from consideration for inclusion in the LDCF project. Inevitably there will be sectoral projects (e.g. TSSD) active in target areas that overlap with the LDCF target, and the project will seek synergistic arrangements to ensure that this has a positive rather than a negative impact.	Strategic	I =3 P = 2	UNDP, MoE and NCDD-S
2	Power dynamics and political-economic structure at the sub-national level undermine the adaptive impacts of the LDCF investments *Potential Consequence:* resources could be allocated to purposes that do not strengthen climate resilience of local livelihoods	The series of support provided in the proposed LDCF project throughout the development planning process will collectively contribute to strengthening proper targeting of beneficiaries. In particular, the adaptation target setting within the context of development planning process on a sub-national dialogue platform will set objective targets for beneficiary selection as well as vulnerability reduction targets. Outcome 3 will put in place a robust performance assessment system which will be the basis for award of grants for infrastructure development under Outcome 2. The performance assessment system will include citizen	Strategic	I = 4 P =2	UNDP, MoE and NCDD-S

#	Description of the risk and Potential Consequence	*Countermeasures / management response*	Type	Probability	*Owner*
		satisfaction measured using a Citizen Scorecard approach. The use of these measures in an integrated manner is likely to contribute to a significant increase in an effective use of the project resources for adaptation objectives.			
Outcome 1 Risks					
4	The cycle of sub-national development planning process limits the window through which climate risks are mainstreamed. *Potential Consequence: CCA is not mainstreamed into sub-national development plans with support from the LDCF project as intended, because the timing of preparation of these plans is not compatible with the project timeline.*	Currently, sub-national development planning cycle has dual timeline: At the commune level development plans are formulated every five years and subordinate investment programs every year. At the district and province level, the equivalent plans and programmes are formulated every five- and three-year interval, respectively. Commune Development Plans will next be prepared in 2017 (during the project period) and District plans in 2019 (shortly after the end of the project). Therefore, the project will focus efforts initially on mainstreaming climate risks in the three-year rolling District Investment Programme and the one-year Commune Investment Programme, both of which are updated annually. Arrangements for ensuring that the results of climate resilient planning are mainstreamed in the five-year development plans will be discussed with NCDD-S.	Organisational	I = 2 P= 3	NCDD-S SNA
5	Insufficient extension agents with required basic skills / learning potential *Potential Consequence: Trainees in the climate resilient extension training lack adequate basic skills in agriculture and/or adult learning techniques. This could then reduce the availability of effective extension agents for Output 2.2*	Project-developed training materials will be suitable to use by trainers with only limited specialist extension training. Trainers will be selected from the public sector, private sector and civil society. Training of trainers will be carefully targeted on extension agents who are expected to be available through the whole project period.	Organisational	I =3 P =3	GDA
6	Insufficient engineers / technicians with suitable skills and learning potential *Potential Consequence: Trainees do not have sufficient basic technical skills to absorb the climate resilient infrastructure training, with the result that there are insufficient technical staff to support Output 2.1*	There are only limited numbers of engineers and technicians available who are fully capable of carrying out technical studies and developing suitable design solutions for complex schemes. The training under the project will address this problem but is not expected to solve it fully. The project will operate a quality assurance system in which scheme designs will be reviewed and specialist expertise deployed as needed.	Strategic	I =3 P =3	Implementing partner
Outcome 2 Risks					
7	Quality and cost-effectiveness of sub-projects undermined by collusive practices	The Commune procurement process is simple and objective and is conducted in public: this creates the opportunity to intervene (i.e. by NCDD-S, project advisers or, if necessary, the implementing agency)	Operational	I =2 P =4	NCDD-S, Province and District

#	Description of the risk and Potential Consequence	*Countermeasures / management response*	Type	Probability	*Owner*
	Potential Consequence: Winning bid prices are artificially high or bid prices are appropriate but sub-standard work is accepted for payment. Experience with the CSF projects indicates the second consequence is a greater concern.	before the contract is signed in case of serious problems being evident. The quality assurance system will include spot-checks of sub-projects under construction. As part of the Performance Assessment, a technical audit will monitor the quality of implementation of a selection of sub-projects each year.			administrations
8	MAFF and MoWRAM unable to agree on integrated agriculture (AC) and irrigation (FWUC) responsibilities for FO *Potential Consequence: FWUC are limited in their scope of activities and thus in the level of ownership and engagement of the farmers, while cooperatives with closely overlapping membership but different leadership are formed for agriculture purposes*	This problem was discussed in stakeholder workshops and representatives of both Ministries readily recognized that the problem exists and were open in principle to the proposed solution (one entity with a dual identity). The project will facilitate dialogue between the Ministries to agree an approach to implement this. Failing agreement, more informal arrangements in which the same farmers and leaders would constitute both the AC and the FWUC will be tested.	Political	I =2 P =4	MAFF, MoWRAM, NCDD-S
9	New techniques fail to demonstrate benefits within short timescale (e.g. because of exceptional weather) *Potential Consequence: Farmers disillusioned and unwilling to invest time and resources in developing climate resilient agriculture.*	There is inherent uncertainty about the suitability and effectiveness of newly introduced agriculture techniques in any given location, and this uncertainty is exacerbated by vulnerability to market and weather conditions. Therefore, there is a risk that failure of newly introduced techniques to produce "instant results" might lead to disillusionment on the part of the farmers. This risk will be addressed by careful matching of techniques to the real needs of farmers through the Farmer Needs Assessment, and by follow-up support to the farmers to assist them to overcome difficulties.	Technical	I =4 P =2	GDA, SNA
10	Material support too complex to administer or creates perverse incentives *Potential Consequence (too complex): project staff seek ways to simplify which undermine the conditionality and other design features.* *Potential Consequence (Perverse Incentives): farmers participate in trainings in order to obtain material support (e.g. cash, inputs) for its own sake even if they have no real interest in investing time and resources in the climate resilient production technique.*	Experience shows that introducing subsidies in cash or in kind can have negative impacts on the effectiveness of agriculture extension, particularly on the sustainability of the intervention once the project-financed subsidy ends. However, it is also recognized that the poorest and most vulnerable farmers will need some material support to offset the risks and start-up costs of adapting a new technology. In light of these risks, subsidies will be carefully targeted and, in the form of conditional cash transfers, will be structured so as to create an incentive for the farmer to invest her or his own resources. Administration of cash transfers will follow a system currently being introduced by NCDD-S and CARD in the social sector as Operational Research with World Bank Support.	Operational	I =2 P =3	NCDD-S, SNA

#	Description of the risk and Potential Consequence	*Countermeasures / management response*	Type	Probability	*Owner*
Outcome 3 Risks					
11	Weaker or more disadvantaged Districts unable to meet performance targets and therefore cannot access full amounts of PBCRG *Potential Consequence: Weak Districts do not receive funds and therefore become disillusioned and cease to strive for improvement; most disadvantaged communities are deprived of access to funds*	The performance measurement system will be include individually agreed targets for each District The project will develop the capacity of the District for self-monitoring and self-evaluation to improve the capacity to achieve these targets	Operational	I =3 P =3	NCDD-S

2.7.3 Assumptions

211. In addition to the risks tabulated and assessed above, the following assumptions are noted in the Results Framework and are elaborated here:

- *Farmers willing to commit time to training and resources to adopting new techniques:* high demand for off-farm labour and high rates of migration for work are part of the context in which the project is designed. It is recognized that not all members of the target communities will prioritise improving their agriculture skills. However, by selecting trainees based on commitment and willingness to learn, it is believed that a sufficient number of committed trainee farmers can be identified.
- *Districts and Communes are sufficiently motivated by opportunity to access additional resources:* it is assumed that the opportunity to access additional resources for infrastructure investments through the PBCR Grants will be sufficient motivation for the District and Commune administrations to commit their own resources and to seek to strengthen their performance in all areas of climate change adaptation (NB that although the performance based grants will be applied to infrastructure investments, the performance measurement will consider a broad range of indicators related to climate change adaptation).
- *Climate change adaptation financing continues to be accessible to target SNA after the project period:* NCDD-S are studying options for creating a long-term financing mechanism for sub-national climate change adaptation, possibly linked to the Sub-National Investment Fund (SNIF) which is foreseen in the IP3. Therefore, there is good reason for optimism that the SNA will continue to be able to access earmarked CCA funds after the project period.

2.8 Cost-Effectiveness

212. The MoE, as the IP of this project, reviewed alternative approaches to reducing vulnerability of rural livelihoods and concluded that the combination of institutional strengthening, targeted livelihood support at the household level focused mainly on training in improved climate resilient agriculture techniques, and small-scale irrigation investments was most likely to be cost-effective; i.e. this approach is least expensive than potential alternatives.

213. In particular, the MoE considered an approach in achieving the same project Objective while focusing on larger irrigation investments, rather than the small to medium scale investments envisaged in the project design. The cost of developing new irrigation schemes is commonly in the thousands of dollars per beneficiary household. On the other hand, using the Government's prior investments in irrigation headworks as a baseline projects and investing LDCF resources in the distribution system would permit benefitting several times larger number of famers.

214. Because the project integrates institutional development objectives (i.e. developing the capacity of sub-national administrations to respond to and reduce climate change risks through their planning and public expenditure management systems) the choice of delivery through the District and Commune administrations was not driven only by cost-effectiveness considerations. However, experience with the Commune/Sangkat Fund and other decentralized implementation of investments in Cambodia indicates that unit costs for infrastructure and services, delivered through the decentralized systems, are no higher and may often be lower than costs of the same outputs delivered through centralized or sector-based approaches.

215. Implementation through NCDD-S and the NP-SNDD also provides the opportunity for cost savings by taking advantage of an existing network of advisers and government staff assigned to support the sub-national planning and investment implementation systems, and the existing body of tools, guidelines and training manuals for sub-national planning and implementation to which the project will add value.

2.9 Sustainability

216. The project is designed for sustainability at all levels, including working with and strengthening the policy framework for climate change adaptation and decentralized services, strengthening the capacity of sub-national administrations to respond to climate change through development planning and implementation, and through assisting local communities and households to take actions to effect a sustainable improvement in their livelihoods.

Institutional sustainability

217. Institutional sustainability arises from implementation through SNAs supported by other agencies of Government acting within their core mandates. The project will assist NCDD-S to develop and strengthen the framework for climate change adaptation actions by the SNA and will also assist in building the capacity of SNA to deliver services in cooperation with the local technical agencies.

218. It is envisaged that in the future SNAs, particularly at the District level, may have direct access to finance earmarked for climate change adaptation and resilient livelihoods. The most likely mechanism (though this is still to be confirmed) would be through the Sub-National Investment Fund (SNIF) that is currently under design. While NCDD-S will not manage the SNIF, it is likely to be closely involved in supporting SNA to access the SNIF. Execution of investments financed by the SNIF will use the District and Commune budget execution arrangements in a similar manner to that proposed for the LDCF funds. In advance of the operationalization of the SNIF, the only proven route for channeling funds into the SNA budgets is through NCDD-S. Therefore, sustainability consists in the use of the SNA budget execution arrangements, while the routing of funds through NCDD-S is considered as the most practical means to achieve this at present.

219. Sub-national technical agencies, notably the PDA/DAO, PDoWRAM, and PDoWA and their District Offices, but also other agencies according to their respective mandates, will participate in implementation of the project through the mechanism of the Technical Facilitation Committees which are legally constituted

under the Provincial and District Councils. Through participation, the technical agencies will enhance their technical capacity in the areas of infrastructure design and management, climate resilient extension services, and identification of gender-sensitive approaches to resilience building. The enhanced capacity will remain within the agencies beyond the project lifecycle and will be put to use by the improved framework of sub-national level planning.

Environmental Sustainability

220. Potential environmental impacts and environmental sustainability of the proposed LDCF project were analyzed using the standard UNDP Environmental and Social Screening procedure. The results of the analysis are presented in detail in Annex 11 and are summarized below.

221. The project outcomes and outputs are all geared towards increasing environmental sustainability of development activities in Cambodia, most importantly in the area of water use for agricultural and household purposes. While the construction of small-scale water infrastructure may result in higher water usage, the construction will ensure efficient delivery of water through, for example, concrete lining. The earthen canals which are practically the design standards for small-scale irrigations in rural Cambodia are known to suffer from seepage loss of nearly 50%. With the introduction/enhancement of climate resilient water infrastructure standards as well as the institutionalization of an incentive mechanism to adhere to such standards, it is expected that, in the long run, such infrastructures will be designed and constructed to minimize the water use while maintaining the equal, if not more, level of productivity.

222. During the design phase of the project, considerations were also made to minimize the potential environmental impacts from the project activities. Potential environmental impacts could arise from the project agriculture activities if the project results in (1) an increase in the area of land under production; (2) an increase in the use of agriculture chemicals; (3) changes in land preparation techniques that could result in increased erosion and soil loss; or (4) increased use of water for agriculture, leaving insufficient water supplies to sustain natural vegetation and habitats.

223. The project is not expected to result in land that has never previously been cultivated being brought into production. Examination of data in the CDB indicates that there is a proportion of rice land (i.e. existing paddy fields) that is not fully cultivated, so introduction of more profitable techniques could have the effect of bringing some of this land back into production. This is not expected to result in a major environmental impact.

224. Extension packages for climate resilient agriculture will be designed carefully to ensure environmental sustainability in land management, crop varieties and use of agriculture chemicals. The project will encourage the appropriate use of agriculture chemicals with due regard to environmental protection including avoiding excess fertilizer application leading to run-off into water bodies.

225. The Farmer Needs Assessment will include a careful analysis of water availability including rainfall patterns and water availability in local water sources (considering extraction either by direct pumping or by construction of irrigation infrastructure). Impacts on other users and the natural environment will be taken into consideration with the aim of identifying sustainable levels and seasonal patterns of withdrawals.

226. The infrastructure works supported by the project could cause limited environmental disruption during the construction phase. Longer-term environmental impacts could arise from changes in land use, from unintended or damaging changes to local drainage patterns and from erosion of the earthworks causing run-off of silt into local water supplies. Erosion of natural ground is expected to be very limited in extent

because of the flat topography and generally slow flow rates of local watercourses. The project will develop capacity for appropriate scheme design taking environmental protection into account and will monitor the quality of designs and construction works. All schemes will be subject to the environmental screening and impact assessment in the CSF Project Implementation Manual (originally developed in consultation with the environmental specialists of World Bank). Most schemes are likely to involve rehabilitation of existing infrastructure and so change of land use will be very limited. Where change of land use occurs this would automatically trigger an environmental impact assessment. Because of the small size of the schemes, environmental impacts are expected to be minor and localized.

Social Sustainability

227. Throughout the design of the current project proposal, the MoE has been fully committed to put the most vulnerable populations, including women and woman-headed households, at the center of this project. This underlies their views that climate resilience in a society at large cannot be achieved without reducing the vulnerabilities of these populations. This view resulted in a number of proposed activities that enhance, not only climate resilience, but also social status among these populations.

228. For example, with the recognition that many women are acting as a de facto head of household in rural Cambodia due to high migration rate of men and young unmarried women especially among poor households, a special project implementation approach targeting these women was agreed by the MoE and other key stakeholders. This is reflected in the set of activities under Output 2.2, targeting Women's Livelihood Groups, where multi-faceted sources of vulnerabilities surrounding these women are addressed in a comprehensive manner. Moreover, a consideration for financial sustainability in the design of this particular Output is also expected to affect their disadvantaged social status: through support on a group savings scheme and pilot-testing of a conditional cash transfer mechanism, specifically tied to climate-resilient farming practices, it is expected that the existing conditions on access to credit services will improve while creating an additional buffer against loss of income from climate anomaly.

229. In general, in an agrarian society, crop failures can be a major source of distress and an important driver of poverty and social instability. Ultimately, all activities proposed under this project contribute to building the capacity among rural Cambodians to be prepared for such shocks and bounce back with minimal impacts on their lives and welfare.

230. That the project will build on existing institutions and in particular will seek to strengthen farmer organizations, will also contribute to social sustainability of the project results. These institutions, despite gaps in their technical and administrative capacities, are well-accepted in rural Cambodia. Capacity development for these institutions will seek to enhance their sustainability and their capacity to assist farmers to adapt to climate change. The project is not expected to result in significant disruptions to village society or loss of existing social capital.

Financial sustainability

231. Considerations for financial sustainability of the project results are embedded in the fundamental principle of the project – strengthening the capacity of SNAs in the planning, budgeting and execution of sub-national development agendas in a way that integrates climate change concerns. As described earlier, SNAs suffer severe shortages of development finance to address priority development actions, let alone climate change actions. However, historically, the CSF has expanded in line with the Government's domestic revenues, i.e. at rates of 10% - 20% per year, resulting in a significant above-inflation increase. It is expected that in the future the CSF and DMF will be supplemented by own-source revenues. In addition,

with an increasing volume of international development finance dedicated for climate change adaptation, it is also expected that SNAs will play an increasingly more important role in dictating the way such finance is used (e.g. by accessing climate change finance through the SNIF, as discussed above). Throughout the course of the project, SNAs, NCDD-S and MoE, among other government agencies, will be exposed to an opportunity to build the preparedness of the national/sub-national system to manage an increasing volume of climate finance.

232. At the activity level, the project has been innovatively designed in a way to maximize the financial sustainability of the project results especially in Outcome 2. The use of conditional cash transfer is based on lessons from experiences in previous donor-financed initiatives – lessons that subsidized/free provision of production inputs discourages ownership of the results and does not stimulate subsequent private (household) investments. On the other hand, conditional cash transfer complemented by the formation of savings group, is more likely to encourage continuous private investments in climate resilient production inputs after the project is over. This is because the conditionality discourages adverse selection of project beneficiaries while the savings option will present an easy access for investment financing.

2.10 Replicability

233. The project activities are expected to have a high degree of replicability. Technical approaches tested in the project – resilient agriculture and water management – are suitable for immediate replication because the need for such approaches is relatively uniform in most rice growing parts of the country. The approach adopted in the project for institutional strengthening – enhanced planning, budgeting and execution – is in fact a replication of other pioneering projects such as the first LDCF project, LGCC and Scale-Up Project, and this is underpinned by a considerable degree of policy/strategic support, most notably NP-SNDD. ,

234. The use of the network of SNAs, through UNDP co-financing project of ACES, as an entry point for wider dissemination of lessons will reinforce the replicability of the project results beyond the immediate provinces, districts and communes that the project targets. Output 1.4 is also an additional mechanism through which lessons are widely disseminated to a range of stakeholders. Large-scale surveys financed by LDCF as part of project activities will generate quantifiable, evidence-based impacts of the project. This will also increase the likelihood of replication and scale-up.

2.11 Stakeholder Involvement Plan

235. The following types of stakeholders are recognized in addition to the core agencies involved in project implementation (i.e. the MoE as Implementing Partner, NCDD-S and MAFF-GDA at national level, and sub-national administrations at Province, District and Commune levels):

a. Ministries and other public agencies with a mandate to support sub-national development and climate change adaptation. This includes all the Government agencies involved in project implementation either as Responsible Parties or through their participation in the Climate Change Technical Team.

b. Development Partners supporting climate change adaptation, sub-national democratic development and rural livelihoods. This is a quite large and diverse group including multilateral and bilateral agencies (e.g. IFAD, FAO, SIDA, EU, World Bank, ADB etc);

c. Project staff of projects with similar areas of activity (e.g. ASPIRE, USAID-HARVEST, projects supported under CCBAP etc);

d. NGOs active in climate change adaptation and rural livelihoods support (e.g. SNV, CEDAC, iDE and numerous others);

e. Farmer Organisations;

f. Private sector entities, including micro-finance institutions and potentially, companies selling agriculture inputs to or buying produce from smallholder farmers.

236. Stakeholder consultations will take place at multiple levels, from the local planning forums to the national workshops and the Project Board. The principle modalities of stakeholder engagement will be:

a. Project planning and review workshops: external stakeholders will be invited to these events at national and provincial level;

b. Participation by the project staff in workshops and discussion forums including the Climate Change Technical Meetings etc;

c. The Knowledge Management Platform will provide a forum for stakeholders to share knowledge, analyse results, discuss issues and prototype new solutions;

d. Presentation of lessons learned and knowledge products in seminars, followed by publication in multi-media formats including web content and hard copy;

e. Presentation, review and validation of draft specific technical materials (e.g. extension materials, technical guidelines etc) for review in workshops and seminars to which external stakeholders will be invited;

f. Sub-national development plans and investment programmes are developed through a participatory process including various types of consultation event. A particularly notable example is the District Integration Workshop which consolidates the investment programmes at Commune and District level with the planned activities of NGOs and other types of development actor.

237. Stakeholder engagement plan by component

Comp-onent / Output	Title	Timing	Objective	Location	Target Participants
1.1	Provincial CCA Planning Workshop	Annually, before SNA planning process starts	Familiarise project agencies and other stakeholders with climate sensitive planning principles and process, and get feedback on progress	Provinces	Provincial technical agencies, NGOs, Farmer Organisations and private sector.
1.2	Validation Workshop for Climate Resilient Agriculture Materials	Year 1	Review and feedback on proposed Farmer Needs Assessment and climate resilient agriculture extension packages	Phnom Penh	MAFF technical agencies, agriculture sector programmes, farmer organisations

1.3	Validation workshop for Climate Resilient Infrastructure materials	Year 1	Review and feedback on standards and training materials for climate resilient small scale infrastructure development	Phnom Penh	MoWRAM and other technical agencies, NGOs
1.4	Knowledge Seminars	1 or 2 per year	Share knowledge, analyse results, present knowledge products, discuss issues and prototype new solutions	Phnom Penh	Ministries, technical agencies, FO, NGOs and private sector
2.1	Annual PBCRG Allocation Workshop	Annually	Inclusive meeting to discuss and confirm priority uses of the District PBCRG	Districts	District and Commune Councils, technical offices, local NGOs etc.
3.1	Workshop to validate the Performance Measurement system	Year 1	Presentation and review of performance measurement system for SNA climate change adaptation	Phnom Penh	Ministries, DPs involved in D&D, NGOs, others.
3.2	Performance Review Workshops	Annually	Result of self-evaluation and external assessment of CCA performance by SNA (includes result of Citizens Scorecard assessment)	Provincial	Provincial, District, Commune, NGO stakeholders
ALL	Inception Workshop	Year 1	Presentation of project objectives and approach, initial workplan, stakeholder feedback	Phnom Penh	Project participating agencies and selected external stakeholders
ALL	Annual Planning and Review Workshop	Years 2 - 4	Presentation of progress reports, work planning and stakeholder feedback. Includes announcement of PBCR Grant allocations for following year	Phnom Penh or target province	Project participating agencies and selected external stakeholders

3 Project Results Framework

This project will contribute to achieving the following Country Programme Outcome:

⇨ CP Outcome 2: By 2015, national and local authorities, communities and private sector are better able to sustainably manage ecosystems good and services and respond to climate change

Country Programme Outcome Indicator

Outcome 2

⇨ Indicator: Number of national and sectoral strategies, plan, and programmes integrating climate change

⇨ Baseline: 4 in 2010

⇨ Target: 10 by 2015

Primary Applicable Key Environment and Sustainable Development Key Result Area

⇨ National and local institutions and individuals are better prepared and able to respond to and reduce climate change-induced and other disaster risks

Applicable SOF (e.g. GEF) Strategic Objective and Programme

⇨ Least Developed Countries Fund (LDCF), National Adaptation Programme of Action (NAPA)

Applicable GEF-AMAT Objectives

CCA-1 Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change

CCA-3 Integrate climate change adaptation into relevant policies, plans and associated processes

Project Strategy	Indicator	Baseline	End of Project Target	Source of Verification	Risk/ Assumption
Project Objective: Sub-national administration systems affecting investments in rural livelihoods are improved through climate sensitive planning, budgeting and execution	**Impact:** % increase in income from agriculture and linked activities of target smallholder households **Sustainability:** Number of Districts and Communes integrating CCA in their development plans and investment programs following NCDDS guidelines	To be collected in the first year of the project 10 Target Districts and their Communes do not have formal climate change adaptation strategies	At least 6,000 households increase income from agriculture by 20% compared with baseline 10 Target Districts and 89 Communes have formulated climate change adaptation strategies integrated in plans and IP	Major Impact Survey Commune Database Adaptation actions identified and recorded in project database	Risks: • Large scale climate resilience building investments, such as SPCR, channelled through sectoral budget allocation, undermine the incentives for climate resilient planning perceived by SNAs • Confusion caused at national and sub-national levels due to the number and volume of externally funded projects and programmes. • Power dynamics and political-economic structure at the sub-national level undermine the adaptive impacts of the LDCF investments
Outcome 1 Climate sensitive planning, budgeting and execution at the sub-national level strengthened	# District and Commune Investment Programs that include specific budgets for adaptation actions (AMAT Indicator 13)	SNA in target Districts do not explicitly list adaptation actions in their investment programs	10 DIP and at least 50 CIP include specific budgets for adaptation activities	Adaptation actions identified and recorded in project database	**Assumptions** • Revised planning guidelines (under development with UNDP assistance) facilitate specific identification of

Project Strategy	Indicator	Baseline	End of Project Target	Source of Verification	Risk/ Assumption
	Number of engineers and technicians (public sector, private sector and civil society) trained in delivery of climate resilient water infrastructure	None	At least 50 engineers and technicians trained using hands-on, demonstration scheme approach. At least 20% female	Training records	climate change adaptation strategies in plans and programs • Institutions (technical departments, NGO and private sector) willing to commit staff time to training • Project generates new knowledge **Risks** • The cycle of sub-national development planning process limits the window through which climate risks are mainstreamed. • Insufficient engineers / technicians with suitable skills and learning potential • Insufficient extension agents with required basic skills / learning potential
Output 1.1 Capacity of sub-national councils (communes and districts) and Planning and Commune Support Units in two provinces enhanced for climate sensitive development planning and budgeting					
Output 1.2 Technical capacity of agricultural extension officers and grass-roots NGOs enhanced for climate-resilient livelihood techniques and sustainable assistance to communities					
Output 1.3 Technical capacity to execute climate resilient water infrastructure design and construction enhanced for about 50 Government technical officials and private contractors					
Output 1.4 Knowledge management platform for sub-national Climate Change Adaptation Planning and resilient livelihoods support established					
Outcome 2 Resilience of livelihoods for the most vulnerable improved against erratic rainfalls, floods and droughts	# Resilient infrastructure measures introduced to prevent economic loss and co-financed by Commune/Sangkat Fund % of targeted households that have adopted resilient livelihoods under existing and projected climate change (AMAT Indicator 3)	None None	At least 100 climate resilient infrastructure schemes have been successfully implemented At least 60% of households participating in livelihoods trainings adopted at least one resilient livelihood technique (half of the uptake is by women)	NCDD-S Project Information Database Major Impact Survey	**Assumptions** • Opportunities exist to improve agriculture livelihoods through improved climate-resilient techniques • Farmers willing to commit time to training and resources to adopting new techniques **Risks** • Quality and cost-effectiveness of sub-projects undermined by collusive practices • New techniques fail to demonstrate benefits within short timescale (e.g. because of exceptional weather) • Material support too complex to administer or creates perverse incentives

Project Strategy	Indicator	Baseline	End of Project Target	Source of Verification	Risk/ Assumption
					• MAFF and MoWRAM unable to agree on integrated agriculture and irrigation responsibilities for FO
Output 2.1 Climate-resilient small-scale water infrastructure designed and put in place in at least 10 districts following the resilient design standards specifically targeting rain-fed farmers					
Output 2.2 Climate-resilient livelihood measures demonstrated in at least 10 districts targeting landless women and farmers practicing rain-fed agriculture					
Outcome 3 Incentive mechanism is in place at sub-national level to manage greater volume of climate change adaptation financing aligned with local development plans	Fiscal incentive structure that incorporates adaptation as climate change risk management (i.e Performance Measurement for PBCRG) successfully introduced (AMAT Indicator 14)	Performance measurement system piloted by NCDD-S needs improvements and has not been implemented in target Districts	Improved system developed, introduced successfully in target districts and adopted for widespread use by NCDD-S	Project Reporting	**Assumptions** • Districts and Communes are sufficiently motivated by opportunity to access additional resources • Climate change adaptation financing continues to be accessible to target SNA after the project period **Risks** • Weaker or more disadvantaged Districts unable to meet performance targets and therefore cannot access full amounts of PBCRG
Output 3.1 Performance-based adaptation financing mechanism is strengthened and applied in 10 districts covering 89 communes and integrated into the enhanced climate-smart development planning					
Output 3.2 Capacity of Districts for self-monitoring of climate change adaptation and resilient livelihood support enhanced					

4 Budget and Work Plan

Award ID:	00085641	Project ID(s):	00093204
Award Title:	Reducing the Vulnerability of Cambodia Rural Livelihoods		
Business Unit:	*KHM10*		
Project Title:	Addressing the Risks of Climate-induced Disasters through Enhanced National and Local Capacity for Effective Actions		
PIMS no.	5174		
Implementing Partner (Executing Agency)	Royal Government of Cambodia, Climate Change Department, Ministry of Environment		

GEF Outcome / Atlas Activity	Responsible Party / Implementing Agency	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	Budget Note
Outcome 1: Climate sensitive planning, budgeting and execution at the sub-national level strengthened	MOE-CCD /NCDD-S /GDA / ALC	62160	LDCF	71200	International Consultants	0	0	26,000	0	35,000	61,000	1A
				71300	National Consultants	44,000	41,000	33,000	33,000	9,000	160,000	1B
				71400	Contractual Services – Individual	10,800	14,400	14,400	14,400	3,600	57,600	1C
				71600	Travel	12,375	15,500	15,500	15,500	5,125	64,000	1D
				72100	Contractual Services Companies	127,500	95,000	130,000	0	102,500	455,000	1E
				74200	AV & Print Production Costs	4,500	8,000	2,500	5,000	2,500	22,500	1F
				74500	Miscellaneous Expenses	1,800	2,400	2,400	2,400	600	9,600	1G
				75700	Training, Workshop & Conf.	114,125	92,225	13,850	13,400	8,050	241,650	1H
					TOTAL OUTCOME 1	**315,100**	**268,525**	**237,650**	**83,700**	**166,375**	**1,071,350**	
Outcome 2: Resilience of livelihoods for the most vulnerable improved against erratic rainfalls, floods and droughts	NCDD-S	62160	LDCF	71300	National Consultants	55,200	86,400	86,400	86,400	18,000	332,400	2A
				71400	Contractual Services – Individual	4,800	9,600	9,600	9,600	2,400	36,000	2B
				71600	Travel	18,000	29,000	29,000	29,000	8,000	113,000	2C

				72100	Contractual Services Companies	24,250	102,000	102,000	102,000	24,250	354,500	2D
				72600	Grants	0	300,000	437,500	600,000	62,500	1,400,000	2E
				74500	Miscellaneous Expenses	2,400	4,800	4,800	4,800	1,200	18,000	2F
				75700	Training, Workshop & Conf.	52,500	229,000	343,000	173,500	4,500	802,500	2G
			TOTAL OUTCOME 2			**157,150**	**760,800**	**1,012,300**	**1,005,300**	**120,850**	**3,056,400**	
Outcome 3: Incentive mechanism is in place at sub-national level to manage greater volume of climate change adaptation financing aligned with local development plans	NCDD-S	62160	LDCF	71300	National Consultants	34,500	45,000	45,000	45,000	10,500	180,000	3A
				71600	Travel	3,750	5,000	5,000	5,000	1,250	20,000	3B
				75700	Training, Workshop & Conf.	10,000	6,000	6,000	6,000	2,000	30,000	3C
			TOTAL OUTCOME 3			**48,250**	**56,000**	**56,000**	**56,000**	**13,750**	**230,000**	
Project Management Costs	MOE-CCD/UNDP	62160	LDCF	71400	Contractual Services – Individual	18,900	25,200	25,200	25,200	6,300	100,800	4A
				71600	Travel	1,980	2,640	2,640	2,640	2,640	12,540	4B
				72800	IT Equipment	24,200	0	0	0	0	24,200	4C
				74100	Professional services	0	5,000	5,000	5,000	5,000	20,000	4D
				72500	Supplies	800	2,700	2,700	2,700	2,700	11,600	4E
				74500	UNDP Direct Project Services	1,000	8,200	8,200	8,200	6,400	32,000	4F
				75700	Training, Workshop & Conf.	6,610	500	500	500	500	8,610	4G
TOTAL MANAGEMENT						**53,490**	**44,240**	**44,240**	**44,240**	**23,540**	**209,750**	
Total LDCF						**573,990**	**1,129,565**	**1,350,190**	**1,189,240**	**324,515**	**4,567,500**	
Total IP-3						**408,750**	**545,000**	**545,000**	**545,000**	**136,250**	**2,180,000**	
Total RGC						**2,250**	**4,122,333**	**4,102,333**	**4,102,334**	**750**	**12,330,000**	

Total UNDP	**1,106,250**	**75,000**	**75,000**	**75,000**	**18,750**	**1,350,000**	
TOTAL PROJECT	**2,091,240**	**5,871,898**	**6,072,523**	**5,911,574**	**480,265**	**20,427,500**	

Budget Notes

Note	Description of Cost Items
OUTCOME 1	
1A	International consultants for Mid Term Evaluation ($26,000) and Final Evaluation ($35,000)
1B	National consultants costed at $1,500 to $3,000 per month for (1) Management Specialist (12 months); (2) CCA Planning Adviser (48 months); (3) GIS and data analysis support (3 months)
1C	NCDD-S Project Finance Assistant (48 Months) and Administration Assistant (48 months)
1D	Travel costs for NCDD-S to support planning, approx. 20 pers-days per year; travel costs for Provincial administration and Technical Facilitation Committee to support planning (approx. 40 pers-days per Province per year in-province); travel costs for field study visits for climate resilient agriculture (5 field days in year 1); travel costs for cross-study visits for Knowledge Platform (5 field days per year); travel costs for CCTT members (approx. 50 pers-days per year); travel costs for MoE-CCD to monitor (approx. 20 pers-days per year).
1E	(1) Costs of technical assistance from an NGO specialized in resilient agriculture for Output 1.2 ($200,000 over 2.5 years); (2) Costs of Major Impact survey: (baseline $87,500 in Year 1; additional beneficiaries $15,000 in Year 2, Mid-Term $50,000 in Year 3 Final $102,500 in Year 5)
1F	Production of vulnerability maps ($5,000) and knowledge product publications ($17,500)
1G	NCDDS Office Operational Costs (stationery, communications etc)
1H	Trainings, workshops and conferences for Output 1.1 ($83,650); Output 1.2 ($51,000); Output 1.3 ($64,000) and Output 1.4 ($43,000)
OUTCOME 2	
2A	National consultants costed at $1,500 to $3,000 per month for (1) Management Specialist (32 months); (2) Social and Gender Adviser in NCDD-S (48 months); (3) National Infrastructure Adviser in NCDD-S (45 months); (4) Provincial Infrastructure Advisers: 2 positions with funding shared with IP-3: 42 months total
2B	Salary for 2 Provincial Finance Assistants (90 months total)
2C	Travel costs for NCDD-S to monitor climate-resilient infrastructure (approx. 120 pers-days per year) and Provincial team (approx. 120 pers-days per Province per year in-province); travel costs for site visits by Province Technical Facilitation Team (20 field days / year); travel costs to monitor and support extension programme (Output 2.2): NCDD-S approximately 120 pers-days per year and Province team approximately 120 pers-days per Province per year;
2D	Contractual services of local NGOs that will be recruited by the District to support group formation and farmer organisations; proposed that NGO also contracts the Technical Services Consultant for infrastructure design and supervision
2E	Performance Based Climate Resilience Grants ($1,200,000 calculated as average $40,000 per District x 10 Districts x 3 years); and Conditional Cash Transfers ($200,000 calculated as 2 instalments of $25 each to 4,000 poor women beneficiaries)
2F	Provincial Office Operational Costs (stationery, communications etc)
2G	Extension trainings (Output 2.2) and farmer organisation trainings under Output 2.1 and 2.2
OUTCOME 3	

Note	Description of Cost Items
3A	Project Management Adviser (4 months allocated) and two Provincial Project Advisers (96 months total)
3B	Travel Costs (Province) for performance monitoring – see Output 3.2 – approximately 80 pers-days per Province per year.
3C	Travel costs for mixed NCDD-S and Province team to conduct annual performance measurement (see Output 3.1)
PROJECT MANAGEMENT	
4A	One Project Finance Assistant based in UNDP, one Finance and Administration Assistant based in MoE-CCD.
4B	Travel costs for project staff for project monitoring (approx. 4 pers-days per month)
4C	Equipment: laptops for CTA and Project Finance Assistant, 2 computer sets for MoE-CCD, 4 computer sets for NCDD-S, 4 computer sets for each Provinces
4D	Audit Costs; $5,000/ year for 4 years
4E	MoE-CCD office operational costs (stationery, communications etc)
4F	UNDP Direct Project Costs for recruitment and contract management of project-financed staff and procurement of goods and services. For more detail, please refer to ANNEX 15 – Country Office Support Services
4G	Inception Workshop and Project Board Meeting Costs (1 meeting per year)

5 Management Arrangements

5.1 Project Execution and Oversight

238. The project will be nationally executed in accordance with the National Implementation Modality (NIM) Manual agreed between the UNDP and Royal Government of Cambodia (RGC). National Implementation is an arrangement whereby the government, in principle, assumes full ownership and responsibility for the formulation and effective management, or execution, of all aspects of UNDP-assisted projects and programmes. It implies that all management aspects of the project are the responsibility of the national authority. However, the national authority remains accountable to UNDP for production of the outputs, achievement of objectives, use of resources provided by UNDP, and financial reporting. UNDP Cambodia in turn remains accountable for the use of resources to the UNDP Executive Board and the project donors.

239. The project will be implemented over a period of four years beginning in the second quarter of 2015, and will be completed in the first quarter of 2019.

240. At the policy and upstream management level, a **Project Board** (PB) will be established to provide high-level guidance and oversight to the project. The PB will be chaired by a senior official of the National Climate Change Committee (NCCC) and made up of senior representatives from all key national implementing agencies, UNDP and other key partner agencies. The PB will be responsible for high-level management decisions and policy guidance required for implementation of the project, including recommendations and approval of project plans, budget and revisions. The PB decisions are to be made in accordance to standards that ensure efficiency, cost-effectiveness, transparency, effective institutional coordination, and harmony with overall development policies and priorities of the Royal Government of Cambodia, UNDP and their development partners. In case consensus cannot be reached within the PB, the final decision shall rest with the UNDP Project Manager (i.e. UNDP Cambodia Country Office). The ToR for the Project Board is presented in Annex 11.

241. The Project **Implementing Partner** is the Ministry of Environment (MoE) of the Royal Government of Cambodia. MoE will assign implementation responsibilities to its Climate Change Department which also acts as the Secretariat to the National Climate Change Committee.

242. A **Project Director** will be appointed who will be a senior official of Ministry of Environment and the National Climate Change Committee. The Project Director will chair the Project Board and will be responsible for operation supervision and direction of the project major decisions including approval of work plans, reports, large procurement and financial transactions and recruitment of senior staff and advisers.

243. At the operational and programmatic level, the project will be supported by the Climate Change Technical Team (CCTT) which consists of technical level representatives of Ministry members of the NCCC. The CCTT will form a working group to support the project and may delegate or co-opt technical people onto the working group as necessary. This group will ensure coordination with the significant number of agencies that have mandates or technical expertise relevant to the project but do not have a major responsibility for implementation. Therefore, in addition to MoE and MAFF, the CCTT working group will include senior technical staff of Ministry of Water Resources and Meteorology (MoWRAM), Ministry of Women's Affairs (MoWA), Ministry of Planning (MoP), NCDD-S and the Association Of Local Councils

(ALC). The key tasks of this group will be to: ensure the technical soundness of the planned activities; ensure technical coordination between various implementing agencies, where such coordination is necessary and where opportunities for synergy exist; provide guidance where technical issues are confronted; and ensure that the project activities are carried out in accordance with existing technical standards and norms.. The ToR for the CCTT Working Group is presented in Annex 11.

5.2 Project Management Team

244. The Climate Change Department of MoE will host the **Project Management Team** (PMT). The PMT will be responsible for overall coordination with the various national implementing agencies for the delivery of project outputs in a timely and effective manner. It will facilitate project-related planning activities such as preparation of annual work plans and be responsible for overall project monitoring and reporting. ToR for the PMT is detailed in Annex 12.

245. The PMT will be made up of the following positions:

- **Project Manager** for coordination, monitoring and reporting of project activities. A senior official of MoE-CCD will be appointed as the Project Manager;
- **Project Knowledge Management Officer** who will oversee knowledge management, monitoring and evaluation activities which are direct responsibilities of the PMT. The Project Knowledge Management Officer will be a staff member of MoE-CCD;
- **Project Finance and Administration Assistant** recruited by MoE to assist with project financial management, financial reporting, general administration tasks and day-to-day support to project management. The Project Finance and Administration Assistant will be recruited on a contract basis for the full duration of the project.

246. The Project Management Team will also be supported by a Project Management Specialist (SB5 contract), who will provide technical support related to Outcome 1 and 2, and a Project Finance Assistant (SB3 contract) who will be based in UNDP. These positions are both financed by LDCF.

5.3 Responsible Parties

247. The following agencies will be designated by Ministry of Environment as Responsible Parties who will bear a direct responsibility for the achievement of relevant Outputs:

5.3.1 National Committee for Sub-National Democratic Development Secretariat (NCDD-S)

248. NCDD-S coordinates the National Programme for Sub-National Democratic Development (NP-SNDD) including recruiting advisory teams in each Province supported by IP3. Under Outcome 1, NCDD-S will be directly responsible for support to climate sensitive planning (with technical inputs from MoP); for gender mainstreaming in the project (with technical inputs from MoWA); for technical standards and capacity development for climate resilient infrastructure (with technical inputs from MoWRAM). NCDD-S will be responsible for delivery of all outputs under Outcomes 2 and 3 through the sub-national administrations. NCDD-S will transfer funds to the Provincial and District Administrations and to the Commune Councils as described in Section 5.6 below, will monitor the use of these funds and will be responsible for consolidating physical and financial reports.

5.3.2 Ministry of Agriculture, Forestry and Fisheries- General Directorate of Agriculture (MAFF-GDA)

249. MAFF-GDA will be responsible for development of technical guidelines and training materials for climate resilient agriculture and for training extension agents (Output 1.2). This role will be closely coordinated with the climate resilient agriculture activities of the IFAD ASPIRE programme, in which MAFF-GDA has a major implementation role. MAFF-GDA staff will provide direct technical monitoring and backstopping to the Provincial Departments of Agriculture and District Agriculture Offices.

5.3.3 Association of Local Councils

250. The Association of Local Councils will participate in the CTTT-Working Group and will be responsible for training District and Commune councilors in climate change awareness and climate sensitive planning, through the UNDP-ACES project (Output 1.1).

5.4 Technical Support and Guidance- National Level

251. The following central government agencies will have a direct role in providing technical support and guidance to the national implementing agencies:

5.4.1 Ministry of Planning

252. The Ministry of Planning (MoP) will participate in the CCCT Working Group and will cooperate with NCDD-S in preparation of the guidelines for mainstreaming climate change adaptation in sub-national planning. MoP will assist NCDD-S in analyzing data from the Commune Database (CDB) and data on the ID-Poor household survey, in order to prepare the District Vulnerability Analysis scorecards and maps.

5.4.2 Ministry of Water Resources and Meteorology

253. The Ministry of Water Resources and Meteorology (MoWRAM) will participate in the CCCT Working Group and will cooperate with NCDD-S in developing and validating guidelines for climate resilient infrastructure (particularly for irrigation) and preparation of training materials. MoWRAM will assist NCDD-S to monitor the quality of irrigation infrastructure constructed under the Performance Based Climate Resilience Grant financing. MoWRAM will also facilitate information sharing and cooperation with the GEF-LDCF financed Early Warning Systems project.

5.4.3 Ministry of Women's Affairs

254. The Ministry of Women's Affairs (MoWA) will participate in the CCTT-Working Group and will be to advise on mainstreaming of gender in climate sensitive planning. MoWA will monitor implementation of the project gender strategy through its Provincial Departments and District Offices.

255. MoWA will also advise on appropriate livelihood activities for poor and vulnerable women, and will make available training materials developed with assistance of a contractor specialized in climate resilient agricutlre for the IFAD-PADEE project.

5.4.4 Technical Support and Guidance – Sub-National Level

256. At the level of the Province and the District, technical coordination between sectoral agencies and the sub-national administrations is achieved through the Technical Facilitation Committee (TFC)

established under the Organic Law and a pursuant Sub-Decree[29]. The key roles of the TCC at both levels include drafting of the development plans and investment programmes.

257. The key technical agencies at Provincial level: Provincial Department of Agriculture, Provincial Department of Water Resources and Meteorology, Provincial Department of Womens' Affairs and Provincial Department of Planning, together with their respective District Offices, will not have separate work plans and budgets under the project but will cooperate through a working group which will be convened under the mandate of the Technical Cooperation Committee. These Provincial and District level project working groups will prepare and implement work plans for joint technical assistance to the sub-national administrations in implementation of the project.

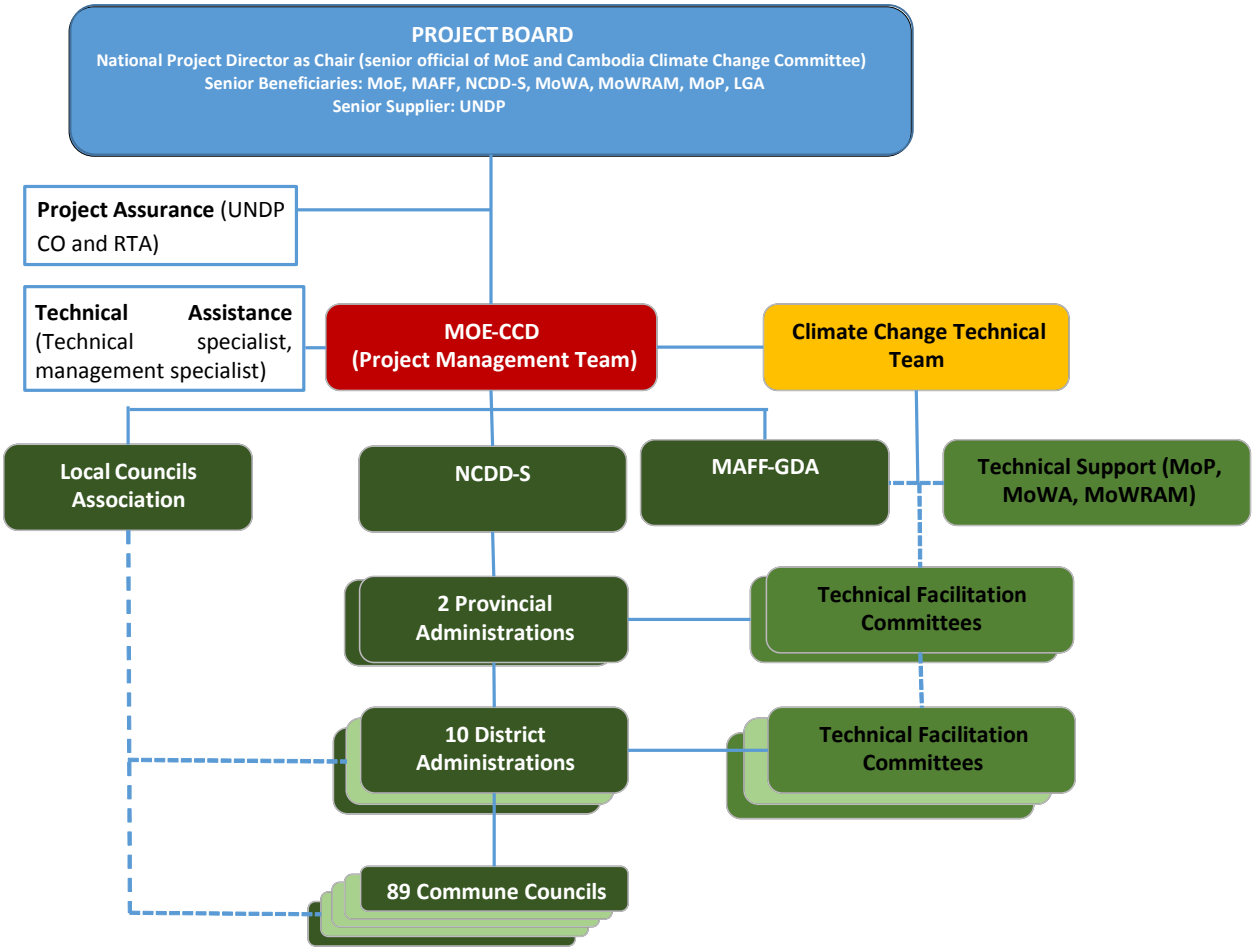

Figure 3: Project Implementation Arrangements (See also the staffing chart in Annex 12)

[29] Royal Government of Cambodia 2009: Sub-Decree No. 218 OrNKr.BK on Establishment, Organization and Functioning of the Technical Facilitation Committee of the Provincial Council, the Technical Facilitation Committee of the Municipal Council and the Technical Committee of the District Council

5.5 Technical Advisory Services

258. The technical advisers listed below will be employed for an extended period or throughout the project period. Additional short-term consultants will be recruited for specific tasks. Outline TOR for these advisers are provided in Annex 11.

259. UNDP will assign a **Technical Specialist**, recruited internationally, who will be responsible to ensure the technical synergy with other ongoing, related projects. This adviser is financed by UNDP as a co-financing contribution to the project. The position will be shared with other duties, with 50% of the Adviser's time being devoted to the project.

260. The Project Management Team will be assisted by a full-time **Management Specialist** (UNDP SB5 contract) who will be responsible for assisting the Project Manager on overall management of the project. Although the Management Specialist will be located in the PMU in MoE-CCD, the Management Specialist will also work closely with NCDD-S to support its implementation responsibilities.

261. NCDD-S will be supported by three full-time national adviser positions: **Climate Resilient Planning Adviser, Social and Gender Adviser** and **Infrastructure Adviser**. The Climate Resilient Planning Adviser will support all aspects of NCCD-S implementation responsibilities with a particular focus on Outcome 1, and will also support development of capacity for climate sensitive planning nationally through the NP-SNDD. The Social and Gender Adviser will support and monitor implementation of the Project Gender Strategy and will advise on implementation of Output 2.1 (livelihood support for poor and vulnerable women) as well as advising on all aspects of community mobilization, group formation and support to farmer organisations (Output 2.3). The Infrastructure Adviser will support implementation of Output 1.3 (technical standards for climate resilient infrastructure) and will support the Provincial Infrastructure Advisers to ensure the technical quality of infrastructure works.

262. MAFF-GDA will receive technical support from a contractor specializing in resilient agriculture for implementation of Output 1.2. It is expected that the same contractor also supports development of agriculture extension and training within GDA under the IFAD PADEE project.

263. The Provincial Administrations will be supported by **a Provincial Project Adviser** and a **Provincial Infrastructure Adviser**. The Provincial Project Adviser will have a background in agriculture. The Provincial Infrastructure Adviser will be a full-time position within the NP-SNDD, financed 50% by the IP3 financing and 50% by LDCF funds during the project period. The Provincial Infrastructure Adviser will support the Provincial Technical Review Committee to ensure the technical quality of infrastructure works, as well as performing the wider role of technical support to C/S Fund project implementation.

5.6 Flow of LDCF Funds

264. LDCF funds will be transferred from UNDP CO to MoE (IP for the project) according to the NIM agreement and from UNDP CO to NCDD-S, through direct cash transfer (NIM advance) at the request of the IP. MoE and NCDD-S will each open a bank account with a commercial bank. Each agency will sign a Letter of Agreement with UNDP under which funds will be transferred directly to each agency separately in accordance with the Project Annual Work Plan and Budget which is signed by the Project Director after approval by the Project Board.

265. MoE will be the sole focal point with UNDP for the purpose of financial reporting. All expenditures from the fund directly transferred to NCDD-S will be included in the financial reporting of MoE. The following diagram depicts the fund flows as well as financial reporting flows.

266. While the details of the specific activities for which MoE and NCDD-S will receive direct cash transfer will be specified in the LoA and Annual Work Plan, in general, the transfers will be made to each agency according to the following general categorizations. MoE will receive LDCF resources for the following activities:

- All activities carried out by the Project Management team and advisers based in MoE-CCD;
- Salary of Management Specialist;
- Activities implemented by the Association of Local Councils under Output 1.1;
- All activities under Output 1.2 including activities of MAFF-GDA and contractual services;
- Costs to cover activities for technical cooperation of national Ministries and agencies in the CCTT including MoWA, MoP, MoWRAM.

267. NCDD-S will receive LDCF funds directly from UNDP for the following activities:

- All project activities conducted by NCDD-S at national level as per an agreed annual work plan with UNDP;
- Salaries of Climate Resilient Planning Adviser, Social and Gender Adviser and Infrastructure Adviser;
- All project activities carried out by sub-national administrations and technical agencies as per an agreed annual work plan with UNDP.

268. At the sub-national level, each Provincial Administration will open a bank account in a commercial bank to receive LDCF funds from NCDD-S (i.e. 2 accounts). These accounts will be used for no other purpose. The principal signatory of the Provincial Administration account shall be the Provincial Governor or a Deputy Governor.

269. Each District Administration will open a bank account in a commercial bank to receive LDCF funds from NCDD-S (i.e. 10 accounts). These accounts will be used for no other purpose. The principal signatory of the District Administration account shall be the District Governor or a Deputy Govenor.

270. NCDD-S will advance funds into the Provincial bank accounts, in accordance with the approved Annual Work Plans and Budgets, to finance the cost of travel, meetings and workshops conducted by the Provincial Administration and the Provincial Technical Facilitation Committee in support of project activities.

271. NCDD-S will advance funds into the District level bank accounts in accordance with the Annual Work Plans and budgets for the following purposes:

- Costs of travel, trainings, meetings and workshops conducted by the District Administration and the District Technical Facilitation Committee;
- Contractual payments to service providers (local NGOs) contracted under District procurement arrangements.

272. The PBCRG funds will be transferred to the accounts of the Commune Councils in Provincial Treasury, based on the division of the grant amount between Communes as approved by the District Council

and checked by NCDD-S. Execution of these funds will be subject to the Commune/Sangkat Fund Project Implementation Manual procedures.

273. At Mid-Term Review (or earlier if appropriate) UNDP, MoE, NCDD-S and Ministry of Economy and Finance will examine whether it is feasible to phase out the District level bank accounts and transfer funds, for payments to be executed at District level, through the District account in Provincial Treasury.

274. Conditional Cash Transfers will be executed following the procedures developed and tested for the Cash Transfer Operational Research (CT-OR) programme implemented under CARD in cooperation with NCDD-S. The list of recipients will be validated by the Commune Council and passed to NCDD-S. NCDD-S will then execute payments directly to the recipients through a suitable financial institution.

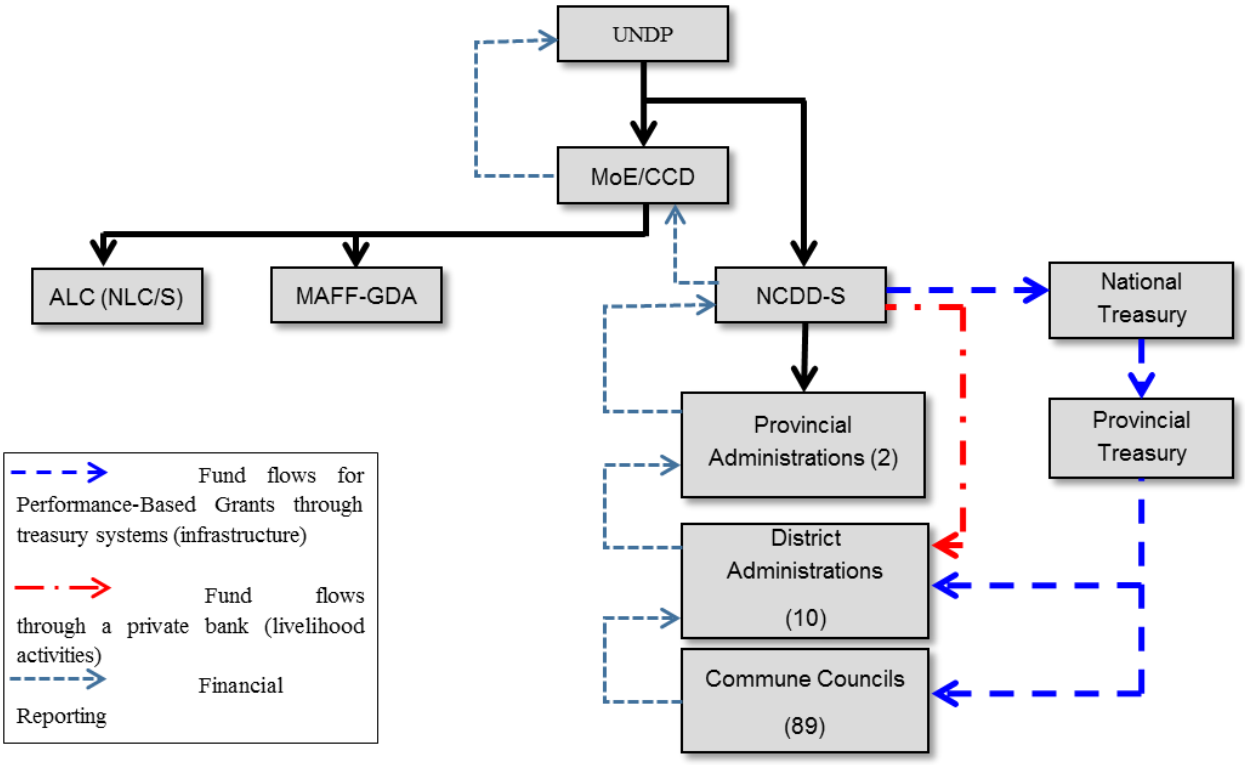

Figure 4: Flow of LDCF Funds

5.7 UNDP Direct Project Support Services

275. Apart from the standard project implementation support and oversight provided by UNDP to the implementation of GEF projects, UNDP will provide the following specific support services at the request of the Royal Government of Cambodia. The services are charged on an item by item basis against UNDP's Universal Price List (UPL) and during the inception phase of the project, the request will be formalized in the form of a Letter of Agreement (LoA).

- Recruitment and contract management of project advisory staff;
- Recruitment and contract management of short-term international consultants;

- Procurement of goods required for the delivery of the different outcomes under the project, as requested by the implementing partners.

276. The support services and conditions are described in the Country Office Support Service Agreement in Annex 15. Services provided by the UNDP Country Office will be subject to audit by UNDP's external (the United Nations Board of Auditors) and/or internal auditors (UNDP's Office of Audit and Investigation).

6 Monitoring and Evaluation

6.1 Framework

277. The project will be monitored through the following M&E activities. The M&E budget is provided in the table below. The M&E framework set out in the Project Results Framework in Part III of this project document is aligned with the AMAT and UNDP M&E frameworks.

278. **Project start**: A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and program advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

279. The **Inception Workshop** should address a number of key issues including:

- Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- Based on the project results framework and the LDCF related AMAT set out in the Project Results Framework in Section 3 of this project document, and finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- Plan and schedule PB meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first PB meeting should be held within the first 12 months following the inception workshop.

280. An **Inception Workshop report** is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

281. Quarterly:

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP/GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs will be used to monitor issues, lessons learned. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

282. **Annually**: Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

283. The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR

284. **Periodic Monitoring** through site visits: UNDP CO and the UNDP-GEF region-based staff will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

285. **Mid-term of project cycle**: The project will undergo an independent Mid-Term Review at the mid-point of project implementation. The Mid-Term Review will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term review will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term review will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The LDFC/SCCF AMAT as set out in the Project Results Framework in Section 3 of this project document) will also be completed during the mid-term evaluation cycle.

286. **End of Project**: An independent Terminal Evaluation will take place three months prior to the final PB meeting and will be undertaken in accordance with UNDP-GEF guidance. The terminal evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term review,

if any such correction took place). The terminal evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The LDFC/SCCF AMAT as set out in the Project Results Framework in Section 3 of this project document) will also be completed during the terminal evaluation cycle. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

287. **Learning and knowledge sharing**: Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

288. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

289. There will be a two-way flow of information between this project and other projects of a similar focus.

290. **Audit:** Project will be audited in accordance with UNDP Financial Regulations and Rules and applicable audit policies. Provision for the cost of the audit is included in the project budget.

6.2 Key Tools

6.2.1 Major Impact Survey

291. A household baseline survey will be undertaken at project inception (Q2 2015) and two follow-up surveys will be undertaken at mid-term (Q1 2017) and end-of-project (Q1 2019). The sampling frame will be smallholder farm households in the project target area, with the expectation that some, but not all, of the households sampled at baseline will become project beneficiaries. The follow-up surveys will be conducted on a panel basis, i.e. the same households will be surveyed as in the baseline. This approach will permit comparison of outcomes for the direct beneficiaries and for a comparison group of non-beneficiary households and, with suitable adjustments for exogenous differences between the groups, should allow statistically robust conclusions about the impact of the project activities.

292. Strong consideration will be given to sharing the survey instrument with other projects in the area of climate resilient livelihoods, notably the major impact survey of the IFAD ASPIRE project and potentially a survey to be undertaken by USAID. It is expected that the basic content of all three surveys will be very similar and therefore, sharing a survey instrument will facilitate cross-comparisons as well as resulting in cost savings. Some adjustments to the basic survey may need to be made to ensure that the specific indicators in the project results framework can be adequately measured.

293. The major impact survey will be contracted to a Cambodian academic or research institution if an acceptable agreement can be reached with an institution with suitable skills. Otherwise, the survey will be contracted out to a commercial survey firm.

6.2.2 Performance Measurement

294. As described in Section 3 above, the performance of SNA in planning and implementing climate change adaptation actions will be measured using a performance measurement system with standardized indicators and individually set targets for each District. The primary purpose of this system is to support the Performance Based Climate Resilience Grants. However, the performance measurement system will yield information that will also be of value in measuring the impact of the project and in particular the achievement of improved capacity in the SNA.

6.3 Indicative M&E Work Plan and Budget

The indicative monitoring and evaluation plan and corresponding budgets is provided in Table 5 below.

Type of M&E activity	Responsible Parties	Budget US$ (excluding project team staff time)	Time frame
Inception Workshop (IW)	PMU UNDP CO UNDP HQ	5,575	Within first two months of project start up
Inception Report	PMU UNDP CO	Included in the workshop budget	Immediately following IW
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	Oversight by UNDP CO/GEF Regional Advisor and Project Director Measurements by national implementing agencies at central and local levels	Tbd – Indicative cost is 20,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	PMU UNDP-CO UNDP-GEF	None	Annually
Periodic status/ progress reports	▪ Project manager and team	None	Quarterly
Mid-term Review	▪ Project manager ▪ PMU ▪ UNDP CO ▪ UNDP-GEF ▪ External Consultants (i.e. evaluation team)	Indicative cost: 26,000	At the mid-point of project implementation.
Terminal Evaluation	▪ Project manager ▪ PMU ▪ UNDP CO ▪ UNDP-GEF ▪ External Consultants (i.e. evaluation team)	Indicative cost : 35,000	At least three months before the end of project implementation
Audit	▪ UNDP CO ▪ Project manager ▪ PMU	Indicative cost per year: 5,000 (20,000 total)	Yearly
Visits to field sites	▪ UNDP CO ▪ UNDP-GEF (as appropriate)	For GEF supported	Yearly for UNDP CO, as required by UNDP-GEF

	▪ Government representatives	projects, paid from IA fees and operational budget	
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US$ 106,575 (+/- 5% of total GEF budget)	

Table 5, Indicative project monitoring and evaluation plan and corresponding budgets

6.4 Miscellaneous Provisions

6.4.1 Prior obligations and prerequisites

295. No prior obligations or prerequisites have been identified.

6.4.2 Agreement on the intellectual property rights and use of logo on the project's deliverables

296. In order to accord proper acknowledgement to GEF for providing LDCF grant funding, a GEF logo should appear on all relevant GEF-supported project publications, including among others, project hardware, if any, purchased with LDCF funds. Any citation on publications regarding projects supported by GEF using LDCF grants should also accord proper acknowledgement to GEF. Alongside GEF and UNDP logo, MoE logo and/or relevant government logos may also feature as the Implementing Partner of the proposed project.

6.4.3 Communications and visibility requirements

297. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at http://intra.undp.org/coa/branding.shtml.

298. Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

299. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

7 Legal Context

300. This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the Standard Basic Assistance Agreement SBAA dated 19th December 1994; as such all provisions of the CPAP apply to this document. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner", as such term is defined and used in the CPAP and this document.Consistent with the Article III of the SBAA, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

301. The implementing partner shall:

a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

302. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

303. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.