KINGDOM OF CAMBODIA

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Ministry of Planning

Best Practices for Integrating Adaptation Indicators in Community-focused Investment Projects

TA 8179: Mainstreaming Climate Resilience into Development Planning

Package C

Gender, Monitoring and Evaluation (M&E), and Mainstreaming at Sub-National Levels

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Preface

Mainstreaming climate resilience in Cambodia is now undertaken at various levels to cope with climate change risks and impacts as climate change continues to pose serious threats to the social and economic infrastructure and local livelihoods. Civil Society Organizations (CSO) and Non-Governmental Organizations (NGO) play an important role in building resilience capacity of the communities through implementation of community-based adaptation and disaster risk reduction projects, which can contribute to the overall local development objectives while reducing vulnerability and climate change impacts. Monitoring progress and effectiveness of the CBA/DRR projects can improve our understanding of the local climate risks, the challenges, the local needs and the effective coping response. CSOs and NGOs are important partners to support grass root development as well as to implement local climate change activities. Integrating adaptation Indicators in CSO projects is an important requirement of project management cycle. This report is one of a series of knowledge products concerning M&E of adaptation produced under the TA 8179 "Mainstreaming Climate Resilience into Development Plan". This knowledge product has the objective to assess and elaborate the current practice in integrating adaptation indicators into the community-focused investment projects. The Ministry of Planning plays a leading role in development of this report in broad consultation with key sector ministries, sub-national administrations, stakeholders and civil society organizations under the technical and financial support of Nordic Development Fund through the Asian Development Bank.

The NSDP 2019-23 has been adopted recently, which would be an important policy document guiding implementation of development goals, as well as climate change response at various levels. The Cambodia Rectangular Strategy Phase IV for "Growth, Employment, Equity and Efficiency" continues to put priority on implementation of Green Growth, Sustainable Development and Climate Change Strategic Plans. The Ministry of Planning has also finished the population census and preliminary results have been released, which would be an information base for next five years development and climate change planning.

M&E framework is an important part of development planning process for all sectors and levels. The Ministry of Planning has adopted a National Results Framework which monitor implementation as well as evaluation of outcome and impacts. It would be pragmatic that all indicators, be development or climate change, must be consistent with the national framework so that data and values of indicators can be aggregated and reliable. Although our knowledge and experience on M&E in general is well enhanced, there are still gaps and constraints in effective implementation of many aspects of M&E, including data collection, limited capacity and funding resources. I believe this knowledge product, together with the previous M&E Guidance on Adaptation Investments and Guidance for sector Climate Change Action Plans can address the knowledge gap and assist all M&E practitioners, planning and management officers to integrate several adaptation indicators into CSO Community Based Focused Investment projects. Your cooperation and support in implementation of M&E is critical towards a success.

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Senior Minister, Minister of Planning

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Executive Summary

The community-based focused investment projects are recognized to play important role in building resilience of local communities in coping with natural disasters and climate change impacts. Integration of adaptation indicators in community-based adaptation and disaster risk reduction projects can generate knowledge and lessons on their effectiveness, success, and challenges. This report draws on experiences and practice of CSOs and NGOs in implementation of CBA Projects and M&E of adaptation in Cambodia and in the region, based on which best practices for integration of adaptation indicators are elaborated and proposed for application.

The report consists of 5 main chapters with logic assessment and elaboration of key aspects of M&E adaptation and resilience. By definition, building resilience is more than adaptation, which is about making people, communities and systems better prepared to withstand catastrophic events—both natural and manmade—and able to bounce back more quickly and emerge stronger from these shocks and stresses.

Chapter II provide as a snapshot of CBA planning process in the context of local climate risks and impacts. The ADB Civil Society Supporting Mechanism (CSSM) and UNDP Small Grant Program (SGP) support implementation of nearly hundred CBA Projects in Cambodia in partnership with Civil Society Organizations (CSO) and Non-Government Organizations (NGO). The Vulnerability Reduction Assessment is conducted as a basis for preparing CBA projects which are selected following scoring criteria.

Chapter III elaborates the practice of integration of adaptation indicators in the CBA projects supported by CSSM and SGP using the log-frame tool. Most of indicators are oriented towards measurement of output indicators, however a few indicators are aligned at the outcome level. While skills and capacity are improved in development and operationalization of adaptation indicators, limited capacity on M&E of adaptation is found common among many CSOs and NGOs.

Chapter IV provides a synthesis of several good practices of several international organizations in integration of adaptation and resilience indicators in CBA projects. Notably, the CARE Adaptation Framework and Oxfam Resilience Building can be good entry points for elaboration of good practice. In general, the approaches and methodologies for designing M&E of adaptation and indicators have some similarity, but also distinctions, and can vary according to country climate exposure, sensitivity and vulnerability.

Chapter V elaborates the possible best practice comprising key aspects of development and integration of adaptation indicators. Those elements of good practice are the following: i) Adaptation Planning Process; ii) M&E framework of Adaptation/resilience; iii) Developing and Selection of Adaptation Indicators; iv) Monitoring and Data Collection; v) institutional coordination; and vi) Evaluation and Reporting.

The conclusion is that there is no size-fit-for all M&E of adaptation, likewise the best practices for every condition. The key considerations for integration of adaptation indicators should be well consistent with adaptation priorities, be adapted to the National Results Framework, and can track progress both outputs and outcomes of the CBADRR Projects.

Acknowledgements

This Document "Best Practices for Integration Adaptation Indicators in Community-focused Investments" is produced with the contribution and inputs from experts and various stakeholders involved in climate change mainstreaming, implementation, and M&E reporting. This knowledge product is an assessment and elaboration of good practice of Civil Society Organizations and Non-governmental Organizations in designing and integration of adaptation indicators in their community-based projects and their annual workplan. On behalf of the implementation team, we would like first of all to express high appreciation to H.E. Dr. Say Samal, Minister of Environment and Chairman of the National Council for Sustainable Development for continuous support and guidance to overcome many challenges during the project implementation. Our deep thanks are given to H.E. Ngan Chamroeun, Secretary General of NCDDS, H.E. Ny Kimsan, Deputy Secretary General of National Committee for Sub-national Democratic Development for consistent support and advice during the consultation process. High appreciation goes to H.E. Tin Ponlok, Secretary General of NCSD, for alignment of M&E framework. We also express sincere gratitude to technical officers and project managers in charge of SPCR Investment Projects of pilot sector ministries, especially MAFF, MOWRAM, MRD, MPWT, NCDDS and MOWA for consultation and inputs on many aspects of climate change mainstreaming and M&E. We also highly appreciate the guidance and recommendations provided by Dr. Srinivasan Ancha, without which the report would not have been possible.

Finally, we also thank to all experts and specialists from Development Partners, NGOs and CSOs for valuable contributions and shared experience in climate change activities and M&E reporting. We hope this Knowledge Product will guide future work on monitoring and reporting of community-based adaptation projects and to improve planning of community focused investments and programs in Cambodia.

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Abbreviation

ADB	Asian Development Bank
BRACED	Building Resilience and Adaptation to Climate Extremes and Disasters
CC	Climate Change
CCA	Climate Change Adaptation
CCAP	Climate Change Action Plan
CCCA	Cambodia Climate Change Alliance
CCCSP	Cambodia Climate Change Strategic Plan
CCTWG	Climate Change Technical Working Group
CIF	Climate Investment Fund
CBADRR	Community Based Adaptation and Disaster Risk Reduction
CSO	Civil Society Organization
C/S	Commune/Sangkat
DCC	Department of Climate Change
DRR	Disaster Risk Reduction
DP5	Five Year Development Plans
DP	Development partners
EWS	Earlier Warning System
FWUC	Farmer Water User Committee
GCF	Green Climate Fund
GDP	General Directorate of Planning (MOP)
IISD	International Institute for Sustainable Development
IP3	Three Years Rolling Investment Program
LGCC	Local Government and Climate Change Project
MOE	Ministry of Environment
MOH	Ministry of Health
MOP	Ministry of Planning
MOWA	Ministry of Women's Affairs
MOWRAM	Ministry of Water Resources and Meteorology
MRD	Ministry of Rural Development
MPWT	Ministry of Public Works and Transport
NAPA	National Adaptation Program of Action
NCDD	National Committee for Sub-national Democratic Development
NCDM	National Committee for Disaster Management
NCSD	National Council for Sustainable Development
NDF	Nordic Development Fund
NGO	Non-Governmental Organization
NIS	National Institute of Statistics (MOP)
NSDP	National Strategic Development Plan
NWGM&E	National Working Group for Monitoring and Evaluation (MOP)
PBRG	Performance Based Climate Resilience Grant
PPCR	Pilot Program for Climate Resilience
NRF	National Results Framework
SPCR	Strategic Program for Climate Resilience
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UN-HABITAT	United Nations Human Settlements Program
WB	World Bank

I. Introduction

Climate change mainstreaming has been implemented at various levels in Cambodia, and success stories and good practice has been recorded with varying degree of achievements for different levels. While good progress and achievement has been observed for national and sector climate change response, climate change planning and implementation at the sub-national levels and community levels are still slow due to various reasons, one of which are the limited capacity of the sub-national stakeholders and funding resources. Civil Society Organizations are also active to support grass-root development and climate change planning to enhance resilience capacity of the communities at risks, however the CSOs themselves also face similar challenges in terms of capacity and declining funding support. In light with stable economic growth that transforms Cambodia to the lower middle-income economy, external funding resources for CSOs are gradually reduced, leaving little opportunity for CSOs to sustain their missions. Notwithstanding the difficulties, CSOs still can play a complementary role along with the sub-national administrations and line departments to fulfil the needs of vulnerable communities and offset climate change impacts.

Involvement of vulnerable groups and the marginalized people in designing and implementation of climate change risks through CBADRR is now being practiced in many countries (Timo Leiter, 2016) with a wide range of success. Community-focused adaptation investment Projects are considered important portfolio, which can leverage the climate resilience capacity of the rural communities most vulnerable to climate change impacts. Measuring its success, effectiveness and efficiency through mainstreaming M&E of adaptation would help improve CBA planning and implementation in Cambodia and in the region.

Community-based adaptation investments are allocated by various donors, such as ADB, GEF, UNDP and DFID, to support local communities through partnership with CSOs and NGOs. The ADB Civil Society Supporting Mechanism and the UNDP Small Grant Facility are an example of community based focused investments (CBFI) implemented in several provinces of Cambodia. Monitoring of success and effectiveness of those CBCAs implemented by CSOs is still in earlier stage of its test and trial, which will evolve to a more robust and practical M&E Framework of adaptation for this segment of climate change interventions. Traditional log-frame matrix of indicators is used by both UNDP and Plan International to measure project results. Integration of adaptation indicators in small funded CBA projects, as well as in the annual workplan of CSOs and NGOs, is still a new undertaking in Cambodia, therefore there is considerable scope for learning and improvement. It is important to note that integration of adaptation indicators in community focused investments face a number of challenges, including limited capacity of CSOs in implementation of M&E of adaptation, lack of funding, limited institutional coordination and data sharing, and aggregation of M&E results of small projects to the country level. Compilation of lessons learned and experience from implementation of CBA Projects funded by these two CBFIs constitutes an information base for elaboration of good practice in integration of adaptation indicators in the CBA projects and CSO workplan. Methodology for the report includes desk review of existing documents (both in Cambodia and outside), group discussions with CSOs funded by ADB TA 8179 and UNDP Small Grants, and individual interview with selected CSOs. The Ministry of Planning will continue to coordinate and guide implementation of M&E of adaptation for CBFI and enrich the best practice in cooperation with sub-national administrations, development partners and the CSOs/NGOs.

II. Experience and lessons in implementation of Adaptation M&E framework for Community-focused adaptation Investments

2.1 Cambodian Experiences

Community Based Adaptation (CBA) is not a new concept rather it is a top-up of climate change consideration on the traditional community based natural resources management (CBNRM), which are important management tools for local governments and NGOs to address equitable rural development needs, natural resources and environmental stewardship, and improved access to public services. It is a grass root development approach that promotes community empowerment and stewardship of common resources such as land, water, forest, fisheries, protected areas…etc., which has been proved effective in the democratic development process. The terms "community based" is meant to involve and empower community in planning, decision making and implementation of community development projects.

Cambodia's CBNRM has been well advanced in several forms to address natural resources management at the community level; some are initiated by the government ministries and some through CSOs and NGOs. Several ministries such as MAFF, MOWRAM and MOE have formed many CBNRMs in the form of community forestry (CF), Community Fisheries (CFi), Community Protected Areas (CPA), Farmer Water User Community (WFUC), Community Based Ecotourism (CBE), which operate following specific government regulations (defining rights and scope of each CBNRM) and by-law agreement among community members. Other CBNRM projects are implemented through the support of CSOs and NGOs, which often are built on the government CBNRM practice and sub-national administrations. Community based adaptation projects (CBA) are implemented along with CBNRM, and their success and good practice of those CBAs has been increasingly recognized by donor community, as well as the government.

a) Planning Process of Community based Adaptation Projects through ADB Civil Society Supporting Mechanism

The Civil Society Supporting Mechanism (MCRDP-CSSM) is a component of the TA-8179 "Mainstreaming Climate Resilience into Development Planning" aiming to strengthen the capacity of CSOs to implement community-based adaptation (CBA) and disaster risk reduction (DRR) projects (annex 2), and to mainstream adaptation and DRR into their operations. Three expected outputs include Output 1: CSOs are trained on climate change impacts and vulnerabilities, policies and adaptation options, participatory CBA and DRR tools, as well as project development and project cycle management; Output 2: Inclusive small grants CBA and DRR scheme is implemented; and Output 3: Participatory knowledge products on community-based adaptation and DRR (PI, 2015). Through a sub-grant mechanism managed by Plan International (PI), Cambodian CSOs design and implement CBA and DRR to respond to the need of the most vulnerable communities to climate change impacts and hazard risks, as such strengthen democratic development approaches in Cambodia. MCRDP-CSSM also supports training, mentoring, and capacity building of civil society organizations and community members in effective participation in mitigation of climate change impacts and enhancing climate resilience.

The planning process of CBA begins with the preparation of vulnerability reduction assessment (VRA) following a training on VRA and climate change adaptation planning using the UNDP VRA handbook. The Expression of Interest (EOI) and VRA reports are submitted together, which are subject to shortlisting and selection based on criteria (Box 1, annex 1). The log-frame indicators are prepared and selected through a participatory consultation with community members. 19 CSOs from a total of 136 EOIs were awarded with a project budget ranging from US$ 40,000 to about US$100,000. 50 communes are targeted for ADB Civil Society Supporting mechanism (Annex 2) with a total budget of $2 million, including expense on training, workshop, and project administration by Plan International.

The key adaptation models and instruments of CBAs can be classified into five categories described below.

- ✓ Capacity building for climate change adaptation planning and mainstreaming (capacity building for communities, schools, and households);
- ✓ Climate resilience livelihoods (integrated farming, organic farming, new seeds, innovative livestock, water management, ecotourism…etc.);
- ✓ Ecosystem-based adaptation (tree planting, conservation of natural resources,…etc.)
- ✓ Disaster risk reduction (social safety net, school awareness raising, water management…etc.);
- ✓ Climate resilience infrastructure (irrigation, rehabilitation of canals, construction of ponds and urban drainage…etc.).

It is important to note that the CBA projects are designed with a mix of several adaptation instruments or categories, where alternative livelihoods options are always well received by communities and considered the win-win solutions to climate change risks.

b) Planning Process of Small Grant Community-based Adaptation/DRR Projects (UNDP)

The GEF/UNDP process for awarding grant to CSOs and NGOs is based on the scoring criteria as summarized in Table 7 (annex 1) following two steps of screening (2010). Similar to PI partnership, training on VRA and project proposal writhing was also provided to interested CSOs/NGOs for conducting VRA and preparation of the proposal. A small budget of US$500 was provided for conducting VRA. After shortlisting project concept, CSOs with shortlisted project concept needs to conduct VRA and develop a full proposal using the VRA (Vulnerability Reduction Assessment) tool of UNDP. Maximum budget is up to US$50,000 with implementation duration of 18 month. A total 71 CBA proposals were awarded and implemented in three phases since 2010 until 2015. The Small Grant Program is contributed by GEF ($3.5 million), SIDA ($4.2 million), AusAid ($0.25 million), UNDP ($0.64 million), UNEP ($0.12million), Japan ($ 0.28 million), and UNREDD ($0.4million) with a total fund of $9.44 million.
The Small Grant CBA interventions fall in several thematic adaptation areas (Ngin Navirak 2016) as the following:

- ✓ Promote diversification of crops and agricultural techniques (integrated farming and commercial farms, SRL, new seeds, …etc.)
- ✓ Provide support for ecosystem restoration and resilience infrastructure such as rehabilitation and management of small irrigations, reservoirs and community ponds, tree planting, conservation of natural lakes…etc.;

- ✓ Create livelihood options by diversifying income/jobs such as handicrafts, small enterprises, community-based ecotourism, saving groups…etc.;
- ✓ Support community for disaster risk reduction through awareness raising on climate change issues and impacts on community livelihoods and commune development plans.

c) Integration of Adaptation Indicators into CBA Projects by Selected CSOs

The Community Based Adaptation Projects are developed following the VRA in the selected communes by CSO partners of the Plan International and UNDP Small Grant Program. The UNDP VRA tool is used to assess climate risks and develop local adaptation response. The PI CSO partners use the log-frame tool to develop indicators to measure the project results, however the UNDP CSO partners did not have clear M&E indicators to monitor the project results[1]. Two CBA projects from each grant are briefed in Box 2, Box 3, Box 4, and Box 5 to illustrate their practice in designing project proposals as well as M&E of adaptation.

Sovann Phoum (SP) is a Cambodian Organization, registered by the Ministry of Interior in 2000 with a mission to improve living conditions of disadvantaged families, especially women and children, by supporting access to education, training, job opportunities, and micro-finance. SP won a contract with PI to implement one CBA project "Innovation for Community based CCA/DRR Alternatives" (Box 2). The indicators are developed to match the objective and results following the Log-frame tool. However, the baselines some how may not represent the actual situation as they have zero score for all indicators. The table does not provide a clear definition, measurement methodology and a schedule of measurement, which can be an indication of inadequacy of the practice. The log-frame of Bondos Khmer (BK) has more output indicators, which can be understood that short-term and small funded project can not see the outcome or impact level during the project life.

Box 2: Innovation for Community-based CCA/DRR Alternatives (SP)

The project has an objective "Enhancing adaptive capacity of communities to improve livelihoods and make available water sources in Tramkak district, Takeo province resulting from climate changes". The project is implemented for 18 months with a total budget of USD95,210. Specific log-frame indicators are proposed as follows:

Obj 1a. % communities have knowledge on and better livelihoods from local chicken raising and vegetable gardening.

Obj 1b. # households access to water for households

Obj 1c. # students access to safe water at schools and their homes

Obj1d. % families of project consuming three meals a day

[1] Later in 2018 GEF SGP climate related projects, such as the case of CoDec, use log-frame to design indicators.

Bondos Komar Association (BK) is a local CSO established in 1989 to support chiefly the education for pre-school and primary school children. BK won a project "Friendly school and community on Climate Change Mitigation and Resilience (CCMR)" with a total budget of US$ 94,867.15 (see Box 3). The proposal has M&E log-frame as indicated in table 8 (annex 3).

Box 3: Friendly school and community on Climate Change Mitigation and Resilience (BK)

The Project Objective is "Schools and communities are more climate friendly and climate resilient". A number of expected results are the following:

Result1: Friendly approach on climate change on mitigation and resilience (CCMR) is mainstreamed in communities

Result 2: Target farmers implements the friendly technology of agriculture innovations

Result 3: Mainstreaming climate change in school curriculum is encouraged among educators.

The project provides benefit to vulnerable people, especially women and girls in community and schools, as complementary activity to existing Bandos Komar projects in rural target area of Pursat province.

Cooperation for Development of Cambodia (CoDec) is a local NGO registered in 2003 with the mission to build and strengthen the capacity of the poor and vulnerable people, especially children and the women to have access to all services. In 2013, following the announcement of UNDP Small Grant, CoDEc won a CBA project "Mitigation of Climate Risks caused by Drought" to target 3 villages of Ko Koh commune in Santuk district. Similar to many CSOs and NGOs, CoDEc has faced a number of sustainability challenge, namely limited capacity, declined external funding, internal governance, and strict government legal requirements (Civil Society law, tax, and social security obligation).

The Cambodian Organization for Women Supports (COWS) won a Small Grant CBA project entitled "Promote community food security, well-being and reduce vulnerability to climate flood and drought through canal Rehabilitation and Water Management" with a total budget of USD52,941.70 (see Box 5). The proposal lacks clarity on tangible or physical results, though it is informed by an interview that some canals and livelihood activities are implemented. Similar to CoDec, the proposal does not contain any log-frame table to monitor project results. This can be a testimony of a limited capacity of CSOs in project proposal writing with appropriate monitoring indicators.

Box 4: Mitigation of Climate Risks caused by Drought (CoDec)

The project was implemented for 1.5 year with a total budget of US$ 52,255, of which $8,940 is cofounded by CoDec and the beneficiary community. There are 3 expected results:

Result 1: rehabilitation of large canal with the length of 700 m, the width of 2 m, and depth of 1.5 m.

- rehabilitation of a main canal with length of 1,500m, width of 2m and depth of 1.5 m.
- rehabilitation of pond (100mX90mX2.5m)

Result 2:

- training on crop farming and animal raising

Result 3:

- establishing saving groups

There is no clear log-frame table containing consistent adaptation indicators for the proposal, although it has some M&E reporting workplan and final project evaluation report. The reason might be the lack of guidance of M&E of adaptation at the time of SGP start-up. The interesting fact about the project outcome and impact after project completion in 2015 is that the rehabilitated canals and pond are still used, and the pond now is designated as community conservation area indicating a sustainability of the project.

However, in 2018 CoDec was awarded by GEF SGP with a project "Conservation of Community Forest to Enhance Community Livelihoods" with a total budget of US$ 92,555 (about half co-funding from other partners), and this time there is no VRA requirement (it is not an adaptation project) but there is a detailed log-frame (see table 4) to monitor the project results.

d) Experience and Lessons from Implementation of Adaptation M&E by CSOs

- All CSOs supported by both PI and UNDP have the capacity to conduct VRA to gather information for planning and identification of adaptation options through participatory consultation with communities of concern. Training on the use of appropriate VRA tools and M&E was provided, which enable them to enhance skills on climate change project planning in addition to their key development mission. However, there is a lack of unified format for proposal writing as well as M&E.

Box 5: **Promote community food security, well-being and reduce vulnerability to climate flood and drought through canal rehabilitation and water management (COWS)**

The objective of the project is "the Commune Council Msar Krong has the capacity to prepare commune investment program of 2015 incorporating climate change adaptation activities". Expected outputs include:

Output 1: By end of 2014 commune council has the capacity to mainstream climate change into investment program

Result 1.1 members of commune council have the capacity to employ VRA tool to consult with community on community needs and requirements for preparation of commune investment program.

Result 1.2: draft commune investment program integrates climate change issues.

Output 2: contribution to commune adaptative capacity through the support of adaptation activities specified in the commune investment program of 2015.

Result 2.1: a number of adaptation activities specified in commune investment program of 2015 are supported.

Result 2.2: lessons learned are documented and shared.

- Adaptation tools or instruments of CBA/DRR can be grouped into five categories based on the adaptation themes of PI (annex 4): i) building adaptive capacity for planning and mainstreaming of climate resilience into projects and commune development plans; ii) climate resilience livelihoods; iii) ecosystem-based adaptation; iv) disaster risk reduction; and v) climate resilience infrastructure and urban drainage. Most of the CBAs have a mix of several adaptation tools across that 5 categories mentioned above, and they largely have a focus on building adaptive/resilience capacity of communities and sub-national administrations (SNA) in mainstreaming climate change adaptation (CCA) and disaster risk reduction (DRR) and support the climate resilient livelihoods (see annex 3). This can be understood by the fact that limited understanding and low livelihood options limit their resilience capacity to adapt to climate change. About 80% of the CBADRR proposals include mainstreaming of climate change planning in CDPs and CIPs, which can be an indication of positive influence of CBAs on the SNA planning. Good geographical distribution of projects across countries has been observed, more are concentrated around Tonle Sap basin and Mekong, which can yield a wide range of improved climate resilience through CBA interventions.

- The traditional logframe tool is used to develop the adaptation indicators consistent with the output and outcome levels (see annex 5). Adaptation indicators are developed through participatory process involving communities exposing to climate risks. Some

CSOs acknowledge difficulty in development of M&E framework of adaptation at the beginning of project implementation, but later they found that M&E was very useful for improving project planning and implementation in an effective manner. However, the CSOs supported by the SGP of UNDP do not have appropriate M&E adaptation indicators attached to the project proposal based on the review of the project proposals of COWS and CoDec (they all are based in Kampong Thom). CoDec later on has the skill to develop the log-frame table for another mitigation project, which indicates a gradual application of M&E in CBA implementation. But overall, limited understanding and capacity for integration of adaptation indicators are found among many CSOs and NGOs in Cambodia based on the review of the log-frame tables of several CBAs and interview with some CSOs.

- Most of indicators proposed by CSOs are designed to measure the results of activities and outputs since CBA projects are small in monitory size and scope, such as number of training organized, number of people able to swim, number of issues identified by farmers…etc., which cannot be considered as adaptation indicators, though that can track the progress of planned activities and expense (see annex 1). There are however a few outcome indicators proposed by some CSOs (SP) to measure the results of objectives.

- As the CBA projects are meant to build adaptive capacity of both affected communities and CSOs themselves, however there is hardly found any indicators related to the capacity of CSOs, though capacity indicator is used in the PI Project Log-frame.

- All indicators developed by CSOs are quantitative, which may not be sufficient to assess the process of climate change consideration at the community levels. The CSOs supported by PI also apply the PPCR indicator 5 in their M&E framework. Qualitative indicators are proposed under PPCR results framework, but prospect for its use for CBAs needs discussion and elaboration with CSOs and DPs.

- Each development partner has its own result framework indicators for CSOs to follow, therefore there is a lack of common indicators to track success and effectiveness of CBAs. Technical guideline for small CBA projects is still based on traditional log-frame, which is not be adequate in the context of climate change. Therefore, aggregation of common results to a country wide is not feasible but they can be more practical to the local sub-national development plans. Some CSOs proposed many indicators, which may put a burden on their work to collect data, since the project life is only about 18 months.

- There is no clear institutional framework exists to maintain the operationalization of the M&E of adaptation for all Community focused investments. The CSOs reported their results framework to DPs and local administrations on a monthly basis with a periodic field verification by the PI or UNDP officers.

- Not all CSOs can manage to sustain their development mission after completion of CBAs due to a number of reasons, particularly: i) decline in external funding support from development partners due to Cambodia entering into low-middle income economies (per capita GDP of over US$1,025 according to the WB), resulting in a shift of focus from natural resources management towards social themes such as child protection and care, education, health, gender and women empowerment, and advocacy; and with a less extent on some resources stewardship and livelihoods; ii) limited capacity in terms of project proposal writing, internal governance, high staff turnover (similarly in the government agencies), and low skills of staff (English barrier and technical skills), and legal requirements (tax, audit, social safety net). For example, WOMEN organization has an annual budget of over US$600,000 (6 social projects in parallel), Aphiwat Neary Khmer got three awards from UNDP grant in a row, while the Social Council Organization (SCO) is likely to close their office soon because of limited staff and funding. While this problem may not be related to M&E per se, the sustainability of CBA/DRR cannot be up-scaled, likewise the M&E framework, if CSOs cease to exist.

- The CSOs supported by UNDP Small Grant Facility conducted independent project evaluation assessment, while CBA projects under PI did not require individual project evaluation report, but rather a combined evaluation assessment was conducted together for all projects by PI team. However, there is a lack of common approach for project evaluation of CBAs, which points to the need for capacity enhancement of CSOs for M&E as a whole.

2.2 Regional Experiences

Good experience on integration of adaptation indicators has been gained by implementation of several community adaptation projects, although there is still limited guidance and understanding on a common approach and good practice for this purpose. A few examples of regional experiences of international organizations and development partners elaborated below, together with the practice of the Cambodian CSOs described above, can serve a learning platform for defining a good practice and its pragmatic replication in the community focused adaptation investments.

2.2.1 CARE Community Based Adaptation Framework

CARE interventions have a focus at the local level, as such the adaptation framework and indicators are designed to measure the adaptive capacity of target populations rather than the fixed outcomes (CARE 2016). The approach for integrating adaptation indicators begins with the formulation of adaptation framework that addresses adaptation capacity and resilience livelihoods, which may have policy implications from the locals to the national levels as summarized in table 1 below. it is crucial to recognize that CBA involves not only action at the local levels, but also it may have a wider policy enabling

environment at both national and local government levels in order for the effective adaptation measures be responsive to the local needs.

Table 1: Community-based Adaptation Framework (CARE)

Level	Climate Resilience Livelihoods	Disaster Risk Reduction	Capacity Development	Addressing Underlying Causes of Vulnerability
National	- Government is monitoring, analyzing and disseminating current and future climate information related to livelihoods - Climate change is integrated into relevant sectoral policies - Climate change is integrated into poverty reduction strategy and/or other development policies	- Government is monitoring, analyzing and disseminating disaster risk information - Government is engaged in planning and implementing disaster risk management (prevention, preparedness, response and recovery) - Functional early warning systems in place - Government has capacity to respond to disasters	Government has capacity to monitor, analyze and disseminate information on current and future climate risks - Government has mandate to integrate climate change into policies - National policies are rolled out at regional and local levels - Resources are allocated for implementation of adaptation related policies	- Government recognizes specific vulnerability of women and marginalized groups to climate change - Policy and implementation is focused on reducing these vulnerabilities - Civil society is involved in planning and implementation of adaptation activities
Local Government/ Community level	- Local institutions have access to climate information - Local plans or policies support climate-resilient livelihoods - Local government and NGO extension workers understand climate risks and are promoting adaptation strategies	Local institutions have access to disaster risk information - Local disaster risk management plans being implemented - Functional early warning systems in place - Local government has capacity to respond to disasters	- Local institutions have capacity to monitor, analyze and disseminate information on current and future climate risks - Local institutions have capacity and resources to plan and implement adaptation activities	- Local planning processes are participatory - Women and marginalized groups have a voice in local planning processes - Local policies provide access to and control over critical livelihoods resources for all

Household/ Individual	- People are generating and using climate information for planning - Households are employing climate resilient agricultural practices - Households have diversified livelihoods, including nonagricultural strategies - People are managing risk by planning for and investing in the future	- Households have protected reserves of food and agricultural inputs - Households have secure shelter - Key assets are protected - People have access to early warnings for climate hazards - People have mobility to escape danger in the event of climate hazards	- Social and economic safety nets are available to households - Financial services are available to households - People have knowledge and skills to employ adaptation strategies - People have access to seasonal forecasts and other climate information	- Men and women are working together to address challenges - Households have control over critical livelihoods resources - Women and marginalized groups have equal access to information, skills and services - Women and marginalized groups have equal rights and access to critical livelihoods resources

Source: CARE 2016.

Based on this community adaptation framework, CARE has developed adaptation milestones and indicators for integration at national, local government/community level, and at household/individual levels. Example of milestones and associated adaptation indicators for household level are extracted for illustration as summarized in table 2.

Table 2: Milestones and Indicators for Household Level

Enabling Factor	Milestones	Indicators	Definitions
Climate resilience livelihoods			
People are generating and using climate information for planning	People are aware of future climate projections for their locality	- % of people able to describe broad future climate trends	- Local knowledge on climate change is important in catalyzing action on adaptation - Raising awareness of expected trends in future climate gives people a base of information upon which to plan and analyze risks
	People are monitoring key climate variables	- Mechanisms in place to monitor key climate	- Monitoring of climate variables is an essential step in

		variables (e.g. rainfall, temperature, extreme events) - Observations of climate change are recorded	managing climate variability and in preparing for longer-term climate change - Local observations of climate change are important to complement scientific information which is often available only at large scales
	People are using climate information in planning livelihoods strategies	- % of people using climate monitoring information to plan their livelihoods strategies (e.g. shifting to early maturing crops) - % of people using seasonal forecasts to plan their livelihoods strategies (e.g. timing of planting) - % of households adopting new, climate-resilient livelihoods strategies based on climate information	- When available, climate monitoring information and seasonal forecasts can help in planning and analyzing risks to agriculture and other livelihoods strategies - When households are adopting new livelihoods strategies, it indicates that they are in a better position to manage climate risks
Households are employing climate-resilient agricultural practices	Households are producing crops that are resilient to climate hazards	- % of households growing crops that are resilient to climate hazards affecting the target area (e.g. drought-resistant varieties)	- Crops and varieties that are suited to the changing climate must be introduced and adopted in order to reduce risk of crop loss
	Households are practicing conservation agriculture	- % of households using conservation agriculture practices	- Conservation agriculture practices conserve soil moisture and increase fertility, thereby increasing resilience to erratic rainfall
	Households are employing a mix of agricultural and off-farm livelihoods strategies	- % of households with non-agricultural income sources - % of households with three or more different income sources	- Households that are completely dependent on agriculture are more vulnerable to climate change, therefore having other, less climate-dependent sources of income can build resilience - Having a range of income sources spreads risk
	Households have increased income from sale of products	- % of households with increased incomes - % increase in income	- Households that are earning income from products (agricultural and non-agricultural) are in a better position to save - In order for people to be less vulnerable, they must have

			savings, therefore a significant increase in income is generally needed
Disaster Risk Reduction			
Households have protected reserves of food and agricultural inputs	Households have flood/cyclone proof food and input storage facilities	- % of households storing food and inputs in safe storage facilities - Kgs of food stored	- Reserves are important to minimize the impacts of extreme weather events, but they must be stored in safe places in order to be useful in times of crisis
	Households have increased agricultural production	- % increase in production of key crops	- Increased production is critical to establishing reserves in food-insecure areas
	Households are saving seeds	- % of houses that are saving seeds - # of varieties of seeds saved	- Traditional seed saving practices are important to reduce costs for farmers, to conserve varieties that may be adapted to climate variability, and to allow farmers to diversify their crop base
Households have secure shelter	Raised houses in flood-prone areas	- % of households with raised households	- As floods become more frequent, it becomes more cost-effective to raise households
	Cyclone shelters exist in areas at risk of cyclones	- % of households with access to a cyclone shelter	- In combination with early warning systems, shelters are important in protecting people from cyclones
	Houses constructed with storm- and cyclone-resistant building techniques	- % of households with cyclone-resistant housing	- Improved construction techniques (using local materials where possible) can reduce impact of storms and cyclone
Key assets are protected	Livestock have shelter from floods and storms	- % of households with livestock sheltered in safe places and/or a safe evacuation point	- Loss of livestock due to floods and storms has a major impact on household economic security, so protection of these assets is important
	Reserves of fodder and water for livestock exist	- % of households storing fodder and water for livestock - % of water and fodder storage facilities that are protected from floods and storms	- Related to the above, reserves of fodder and water are important to preserve livestock through times of crisis
Local Capacity Development			
Social safety nets	Social protection schemes in place	- % of people registered for social protection	- Social protection is an important strategy in protecting people,

are available to households		schemes* - % of vulnerable populations receiving social protection benefits	particularly the most vulnerable, from increasing climate hazards
	Community disaster fund exists*	- Funds available at community level to support disaster risk reduction, response and recovery	- The existence of a community disaster fund can facilitate risk reduction activities and/or faster and locally-driven response
Financial services are available to households	Functional micro-finance institutions exist	- % of community members (vulnerable/nonvulnerable) accessing micro-finance services - Institutional capacity of micro-finance institutions	- Access to financial services has proven important in facilitating adaptation
	Micro-finance institutions provide a range of services	- % of micro-finance institutions offering a range of services - Services offered	- To increase resilience, people will need access to a range of different services including savings, credit, and insurance
People have knowledge and skills to employ adaptation strategies	People are aware of adaptation strategies	- % of target population (vulnerable/non-vulnerable) aware of climate-resilient livelihoods strategies appropriate to their context	- People need to know that there are alternatives in order to plan for adaptation
	People have technical skills to implement adaptation strategies	- % of target population trained in technical skills - % of target population demonstrating application of skills	- Some adaptation strategies may require new technical skills for implementation - Application of skills demonstrates proficiency
Addressing underlying causes of vulnerability			
Men and women are working together to address challenges	Women are empowered to make decisions within the household	- % of women who feel empowered in household decision-making - % of men who feel it is important to involve women in decision-making	- In many contexts, household decision-making is dominated by men, reducing the ability of women to influence the adaptive capacity of their families
	Workload is shared between men and women	- Time spent by men and women on livelihoods activities (agriculture, child care, fetching fuel and water, etc	- Women's workload often increases with environmental change and with the need to pursue a range of livelihoods activities, so sharing the workload becomes increasingly important
	Control of family income and savings is shared	- % of women who have independent sources of income	- Women are empowered by having their own sources of income and having control of how it is used

		- % of women who have control over the income they make themselves - % of women who have shared control of family income - % of men who feel that family income belongs to both partners	- Shared control of family income can lead to increased family well-being as men and women tend to prioritize differently - Men must recognize the role of women as family decisionmakers
Households have control over critical livelihoods resources	Households have secure land tenure	- % of households with secure access to land for livelihoods purposes	- It is difficult for people to invest in sustainable land management strategies when they do not have secure land tenure
	Households have access to common property resources for livelihoods purposes	- % of households with secure access to a water source - % of households with access to pasture, forests or other common property resources	- Secure water access is key for household and agricultural purposes - Sharing of benefits from sustainable management common property resources can facilitate adaptation
Women and marginalized groups have equal access to information, skills and services	Women and marginalized groups have access to information	- Women and marginalized groups are engaged in community-based organizations - Community information sharing uses appropriate messaging and means of communication for women and marginalized groups	- CBOs will only be effective in promoting appropriate community development if women and other marginalized groups are active participants - Information must be shared in communities in a way that it is accessible to all
	Women and marginalized groups have access to skills	- Literacy rates for men, women, marginalized - Existence of targeted skills development programs for women and marginalized groups - % of women and marginalized groups accessing these programs	- Literacy rates can demonstrate inequalities in education - In a context where women or marginalized groups have limited access to formal education, specialized programs can facilitate skills development
	Services are targeted to women and marginalized groups	- Existence of targeted services for women and marginalized groups - % of women and marginalized groups accessing these services	- In some contexts, targeted services such as health or extension services may be required to reach vulnerable populations

Women and marginalized groups have equal rights and access to critical livelihoods resources	Women and marginalized groups have secure access to and control over land	- Women and marginalized groups are aware of their land rights - Women and marginalized groups are empowered to claim their rights to land	- In order for women to claim their rights, they must first be aware of what those rights are, and then empowered to claim their rights (e.g. through negotiation with community leaders)
	Women and marginalized groups have secure access to and control over common property resources	- Women and marginalized groups are aware of their rights to common property resources - Women and marginalized groups are empowered to claim their rights to common property resources	- In order for women to claim their rights, they must first be aware of what those rights are, and then empowered to claim their rights (e.g. through collective use of land by women's groups)

2.2.2 Climate Investment Fund Experience

The Climate Investment Fund has introduced PPCR Result Framework for monitoring and evaluation of adaptation investments under the portfolio of Strategic Program for Climate Resilience (SPCR) in Cambodia. Five PPCR Core Indicators are used for monitoring climate resilience at national/ country level and project levels. Score cards and data tables are developed for recording the quality and quantity of the core and optional indicators. The five PPCR Core indicators are as follows:

- ✓ Core Indictor 1: Degree of integration of climate change into national planning (National Level)
- ✓ Core Indicator 2: Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience (National Level)
- ✓ Core Indicator 3: Quality of and extent to which climate responsive instruments/investment models are developed and tested (Project level)
- ✓ Core Indicator 4: Extent to which vulnerable households, communities, businesses and public sector services use improved PPCR supported tools, instruments, strategies, activities to respond to Climate Variability and Climate Change (Project Level)
- ✓ Core Indicator 5: Number of people supported by the PPCR to cope with the effects of climate change (Project level)

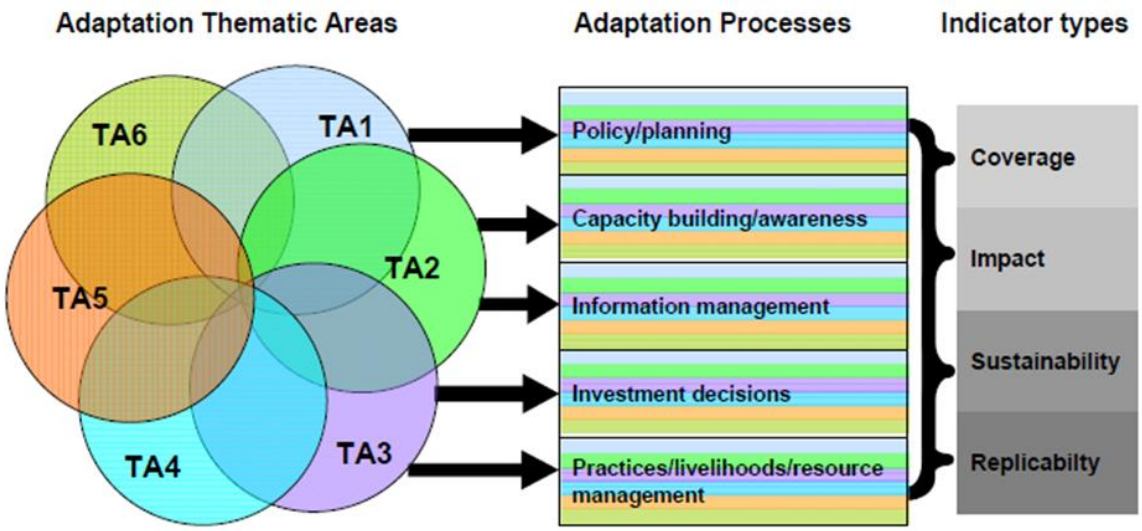
Core indicator 1, 2, 3 are qualitative, which monitor the degree and quality of integration at national and project levels, while Core Indicator 4 and 5 are designed to measure the number of communities or households benefiting from the projects. As these PPCR core indicators are applied for large SPCR Projects (several USD millions), their application for small CBA projects can be fit provided resources are adequate for data collection and monitoring. Core indicator 5 is used by CSOs of Package B, which is found common in many log-frames of CBA projects.

2.2.3 UNDP/GEF Experiences

Monitoring and evaluation for community-based adaptation of UNDP portfolio is still a new field, and the CBA projects are piloting innovative approaches (Figure 1) and evaluating the success of locally-driven adaptation projects, and generating lessons to inform ongoing practice. The Vulnerability Reduction Assessment (VRA) is conducted following UNDP's Adaptation Policy Framework ((www.undp-adaptation.org/project/cba), and is measured in a series of meetings with local community stakeholders. The UNDP adaptation thematic areas include:

- TA1: Food security
- TA2: Water security
- TA3: Public health
- TA4: Disaster risk management
- TA5: Coastal zones
- TA6: Natural resources

Figure 1: UNDP Structured Approach for M&E



The quantitative and qualitative indicators are used to measure the success of UNDP portfolio/project in achieving (figure 1):

- ✓ Coverage: the extent to which projects engage with stakeholders.
- ✓ Impact: the extent to which projects deliver the intended results, or bring about changes in behavior that support the portfolio's objectives.
- ✓ Sustainability: the ability of stakeholders to continue to adapt beyond project lifetimes.
- ✓ Replicability: the extent to which experiences, results and lessons are captured and disseminated for broader benefits.

A number of UNDP standard indicators for monitoring adaptation interventions at the local scale are illustrated in table 3 below.

Table 3: UNDP Standard Indicators

Indicator Type	Name of Indicator
Coverage	• Number of policies, plans or programs introduced or adjusted to incorporate climate change risks. • Number of stakeholders (e.g. communities, households, agencies, decisionmakers) engaged in capacity building activities for vulnerability reduction or improved adaptive capacity. • Number of stakeholders served by new or expanded climate information management systems (e.g. early warning systems, forecasting, etc.). • Number of investment decisions revised or made to incorporate climate change risks). • Number of risk-reducing practices/measures implemented to support adaptation of livelihoods and/or resource management.
Impact	• Percent change in stakeholders' behaviors utilizing adjusted processes, practices or methods for managing climate change risks, assessed via Quality Based Survey (QBS) or other evidence. • Percent change in stakeholders' capacities to manage climate change (e.g. communicate climate change risks, disseminate information, or make decisions based on high quality information), as relevant, assessed via QBS. • Percent change in use of/performance of information management systems (e.g. early warning response times). • Percent change in stakeholder perceptions of vulnerability (or adaptive capacity) to a recurrence of primary climate change-related stress(es), assessed via QBS. • Narrative description of the role of project interventions in reducing vulnerability (or improving capacity to adapt to climate change-related threat(s)), assessed via QBS. • Improvement in the relevant quantitative development outcome (food security, water resources, health outcomes, etc.) as a supplemental indicator.
Sustainability	• Number of stakeholders involved in capacity building for implementing specific adaptation measures, policy/planning processes or decision-support tools. • Availability of skills and resources necessary to continue adaptation after conclusion of project (at relevant scale), assessed via QBS. • Stakeholder perceptions of adaptation sustainability, assessed via QBS.
Replicability	• Number of 'lessons learned' codified.

	• Number of relevant networks or communities with which lessons learned are disseminated.

2.2.4 ITAD Resilience Measurement-monitoring, Evaluation and Learning Framework (MEL)

ITAD works in partnership with public, private, and non-governmental organizations to achieve sustainable development and poverty alleviation. It provides high quality strategy, monitoring, evaluation, and learning consultancy services to clients from community to policy level, in the UK and worldwide (https://itad.com/about-us). The Resilience Measurement, Evidence and Learning Community of Practice (CoP) was launched in 2016 to respond to a growing recognition of the concept and aspiration of resilient individuals, communities, and systems (Rockefeller Foundation 2016). The MEL draws on several practices and lessons from implementation of resilience measurement of several resilience related projects and programs, which can enrich good practice for planning community focused investment as well as designing resilience measurement (RM) for that. Some resilience measurement approaches are illustrated below, which can be used for monitoring of community focused investment in the context of climate resilience (section d, e).

e) Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED)

Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) is funded by DFID to help people become more resilient to climate extremes in South and Southeast Asia and in the African Sahel and its neighboring countries. Four aspects (Areas of Change) were identified as key processes of change in the BRACED program: i) knowledge, understanding and commitment in relation to resilience-building; ii) skills and practices to manage climate and disaster risks; iii) collaboration and coordination in partnerships; and iv) decision-making processes to ensure inclusive participation (Paula Silva Villanueva and Victoria Sword-Daniels, 2017). Specific indicators are developed based on country circumstances. For example, key resilience indicators to be monitored by BRACED Alliance Myanmar Project are the following (Rockefeller Foundation 2016):

- Output level: number of people supported by BRACED to cope with the effects of climate change
- Outcome level: number of people whose resilience has been improved as a result of BRACED
- Outcome level: number of institutions supported by BRACED better able to protect the lives and livelihoods of most vulnerable, particularly women and children, from climate extremes.

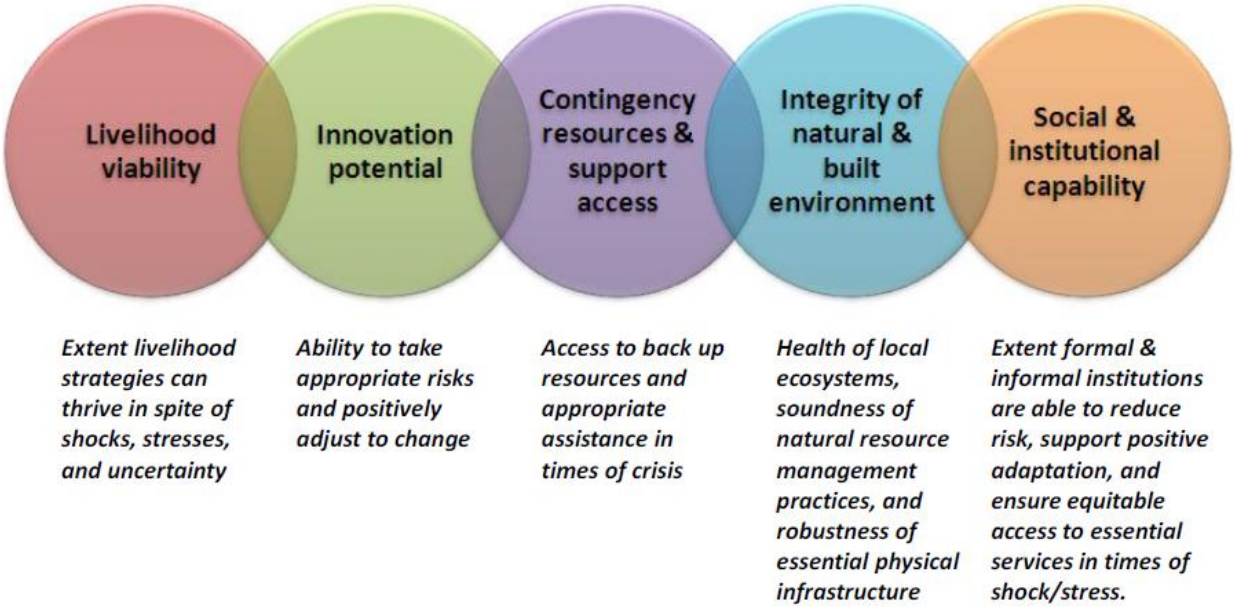
The Myanmar BRACED Alliance developed a composite index for resilience using 30 outcome level sub-indicators across five dimensions of changes as listed below.

- ✓ Increased preparedness and coping mechanisms
- ✓ Increased resilience of systems and livelihoods
- ✓ Improved safety nets
- ✓ Better access to communications, access and use of information
- ✓ Improved decision making and planning.

f) Building Resilience by Oxfam

Oxfam defines resilience as the ability of women and men to realize their rights and improve their wellbeing without shocks, stresses and uncertainty. The Oxfam approach to enhancing resilient development addresses the impacts of shocks, stresses and uncertainty on people living in poverty as well as the causes of vulnerability and risks. Oxfam conceptualizes a multidimensional approach for measuring resilience (Oxfam GB 2013) and develop a composite of resilience index consistent with 5 resilience dimensions (see figure 2).

Figure 2: Dimensions affecting the ability of households and communities to minimize risks from shocks stresses and uncertainty.



Source: Oxfam GB, 2013.

Specific indicators used in Somali (Oxfam 2013) are listed according the 5 resilience dimensions in table 4 below.

Table 4: Resilience indicators in Ethiopia-Somali Region

Dimension	Potential Indicators	Rational for Inclusion
Livelihood Viability	Household wealth status	Poor households assumed to be more at risk
	Household food security	Food insecure HHs assumed to have less viable livelihoods
	Household dietary diversity	HHs with poorer nutrition assumed to be more at risk
	Livelihood diversification	HHs with more diverse livelihoods assumed to be at less risk
	Gender risk differential	Differential gender impacts of shocks assumed negative
	Crop portfolio	More diversity, more drought tolerant crops = less risk
	Livestock portfolio	More diversity + more drought tolerant livestock = less risk
	Livestock herd size	The larger the herd size, the less the impact of livestock loss
	Ownership of pack animal	Means of transport to market, thereby enhancing access

	Livestock lost to disease Livestock lost to drought Livestock vaccination Access to drought warning information Drought preparedness practice	More experience of disease = less healthy livestock Direct indicator of susceptibility to impacts of drought More healthy livestock assumed to be more tolerant Enables the household to plan and reduce risk Indicates that the household is proactive to minimizing risk
Innovation Potential	Attitudes towards new livelihood practices Awareness of climate change Innovation practice Access to credit Access to state innovative support Market access	HHs less open to new practices are less likely to innovate HHs with more awareness in better position to adapt Direct indicator that HH is innovative Enables HH to access resources to support innovation Sustainable access to such support conducive for innovation Better access to markets = more livelihood opportunities
Access to Contingency Resources and Support	Group participation Social connectivity Perceptions of local government emergency support Savings Remittances or formal earnings Ownership of fungible livestock	More opportunities for support in times of crises More opportunities for support in times of crises Level of confidence of HHs assumed related to what will actually happen in times of crises More savings a HH has, the more it can cope in crises Better access to remittances = better coping in crises Enables HHs to get by in times of crises ("HH bank")
Integrity of the Natural and Built Environment	Extent of soil erosion Access to irrigation for farming Access to water for livestock/consumption Access to grazing land	High levels of soil erosion decreases productive Enables yields to be maintained despite rainfall variability More difficulties in access makes it more difficult to cope More difficulties in access makes it more difficult to cope
Social & Institutional Capability	Awareness of drought preparedness plan Participation in drought prep. meetings Receipt of drought prep. information Awareness of community level drought risk reduction initiatives Violent dispute experience Awareness of local leader/ community institution in supporting adaptation Perceptions of effectiveness of local leaders/institutions	Indicates planning is taking place + public participation Indicates planning is taking place + public participation Indicates that community institutions are fulfilling roles Indicates that community institutions are fulfilling roles Levels of conflict reflects capacity to address disputes Indicates that community institutions are fulfilling roles Level of confidence of HHs assumed related to the effectiveness of the actions of local leaders and institu

Source: Oxfam GB, 2013.

III. Best Practices for Integrating Adaptation Indicators in Community-focused Investment Projects

It is important here to agree first on the definition or concept of best practice and what are the key elements that constitute that best practice of integration of adaptation indicators in the community focused investments. The terms "Community Focused Investments" here refer to projects or programs that support and benefit directly the local communities, and their implementation are often delegated to community associations, civil society organizations and non-government organizations as they work to support community grass root development. Community based projects can be implemented by sub-national administrations and provincial line departments as well, which are separately addressed in previous knowledge products under this TA 8179. The CSOs and NGOs are mobilized through voluntarily contributions as well as external support from various development partners. Most projects of CSOs are small in monitory size and project scope, therefore their M&E practice may be confined to a certain level of local needs, but lessons can be of global benefits. To ensure effectiveness, efficiency, reliability and sustainability of M&E of adaptation, key elements of best practice should be included but not limited to the following:

- Adaptation Planning Process
- M&E framework of Adaptation/resilience
- Capacity Building
- Institutional Coordination
- Developing and Selection of Adaptation Indicators
- Monitoring, Data Collection and Implementation
- Evaluation and Reporting

These elements are elaborated below as best practices for designing and integration of adaptation indicators into community-focused investment projects.

i) Adaptation Planning Process

M&E of adaptation is still a new undertaking for various international funding mechanisms and development partners (DP) to support resilience capacity of stakeholders to combat climate change at different levels of society and sectors. The planners or managers should have a good understanding on adaptation planning, the adaptation measures, and the corresponding adaptation indicators to track the results and progress, and are able to distinguish adaptation from business as usual development. The Vulnerability Reduction Assessment (VRA) is a standard tool widely used for identification of climate risks and corresponding adaptation measures or technologies according to the local needs. The use of VRA by PI and UNDP partners can be a good example of good practice in adaptation planning, which is also the basis for designing adaptation indicators. Capacity building is required for the CSOs in adaptation planning, proposal writing, as well as identification of adaptation options. In Cambodia possible adaptation interventions or technologies can fall into five categories, but not exhausted:

1) building adaptive capacity for planning and mainstreaming of climate resilience into projects and local development plans;
2) climate resilience livelihoods;
3) ecosystem-based adaptation;
4) disaster risk reduction; and
5) climate resilience infrastructure, irrigation and urban drainage.

These adaptation categories are similar to the CARE framework as described above. It is important to understand the definitions of key climate terms underpinning the M&E design and implementation, particularly “climate adaptation” and “climate resilience”, which can complement each other in terms of project planning and M&E design.

Climate Resilience is defined as the ability to absorb and recover from climatic shocks and stresses, whilst positively adapting and transforming structures and means for living in the face of long-term change and uncertainty (GIZ).

Adaptation is defined as adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts (UNFCCC 2014).

Building resilience is about making people, communities and systems better prepared to withstand catastrophic events—both natural and manmade—and able to bounce back more quickly and emerge stronger from these shocks and stresses” (Anna Williams, WB 2016). The concept of resilience thus has additional components beyond adaptation’s focus on adjusting to minimize harm, . The climate resilience term is the focus of the CIF portfolio through the Strategic Program for Climate Resilience (SPCR) for funding adaptation investments in key sectors in Cambodia.

ii) M&E Framework of Adaptation and Resilience

The M&E Framework is understood as a systematic approach and structure for developing and operationalizing adaptation/resilience indicators according the different levels of result change. The result framework has been used by various funding institutions such as World Bank, GEF/UNDP and Climate Investment Fund. The best practice of M&E framework should be adaptive to the national results framework (figure 3) comprising logical flow of results from the bottom: inputs, activities, outputs, outcomes, and impacts (Figure 3). Common understanding of the sequence of result chain is a perquisite for effective M&E practice across different scales: household, community, and institutions. It can help design appropriate adaptation indicators to measure the outcome and impact of CBA implementation.

Each step of sequential result has distinctive definition in the context of climate change as described below.

Inputs: refer to the financial, administrative and regulatory provision or support for implementation of particular projects and programs.

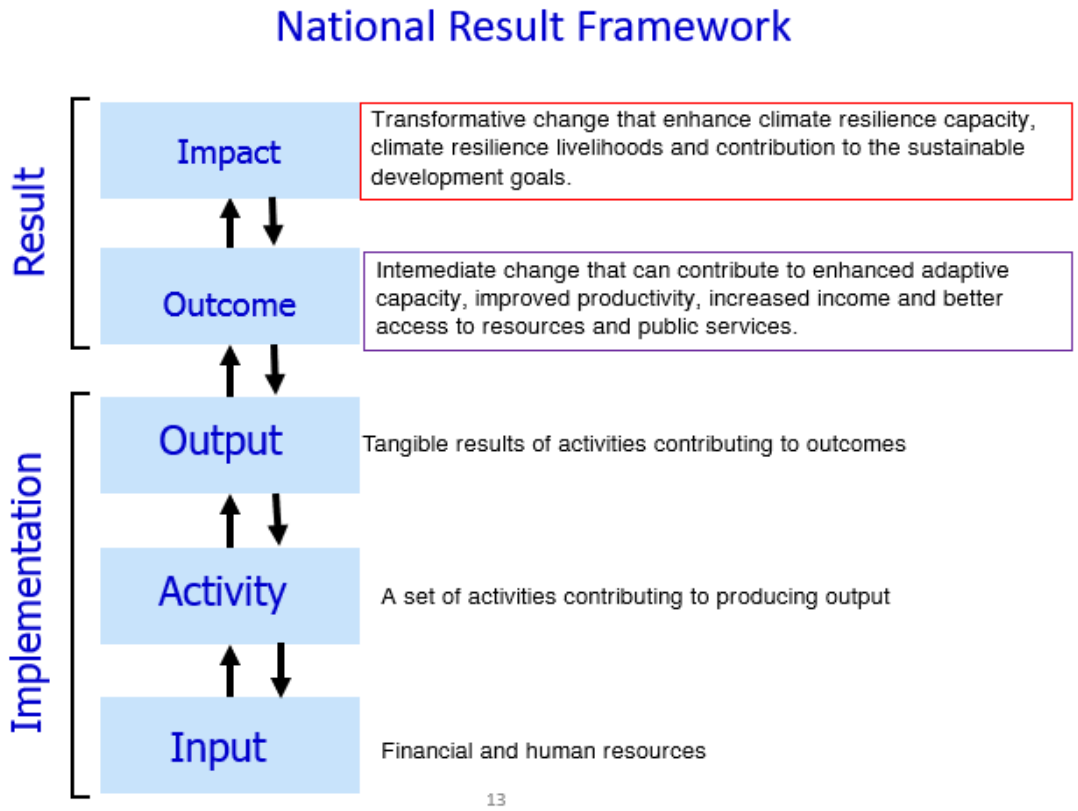
Activities: can be understood as a set of specific activities or actions implemented to achieve outputs and outcomes of projects or programs, such as research, development of training modules, setting up earlier warning system (EWS), organizing trainings, development of institutional coordination, construction of roads and irrigation schemes, construction of clean water supply…etc.

Outputs: are tangible results of a set of activities and interventions based on the technical and financial inputs, which can include number of people trained, accessibility to climate information, VRA reports and feasibility study reports, knowledge products, adaptation plans…etc.

Outcomes: are understood as a result or change that can contribute to enhanced adaptive capacity, improved productivity, increased income and better access to resources and public services

Impacts: are the significant changes that have a positive and transformative impacts on climate resilience capacity, climate resilience livelihoods and contribution to the sustainable development goals.

Figure 3: National Result Framework



iii) Capacity Building

As indicated earlier in section II, most of CSOs have limited capacity in selection and implementation of adaptation/resilience indicators, therefore capacity building can improve their understanding and skill. The subjects of training can include the following:

- ✓ Basics of climate change;
- ✓ Common Concepts and M&E Framework of Adaptation;
- ✓ Guidance on designing, selection and implementation of Adaptation Indicators;
- ✓ Data collection and management of M&E of Adaptation;
- ✓ Project completion evaluation.

iv) Institutional Coordination

There is no clear institutional mechanism to oversee the implementation and reporting of the M&E of adaptation for the community focused adaptation investment. Currently the CSOs and NGOs report the M&E results to the development partners because the M&E results link to the funding agreement. The commune database administered by the Provincial Department of Planning (PDP) under the Ministry of Planning does not include the tracking progress of such community-based projects, which may partly fall under the jurisdiction of technical provincial departments as well as the sub-national administrations (commune and district administrations). The NCDD database records the commune projects, which include the sources of funding from development partners, but there is no data recorded on the output/outcome indicators related to each project.

Experience at the regional level does not tell clearly either if such national institutional mechanism should be put in place to track the progress of community-based adaptation projects. CARE, for example, suggests linking the adaptation measures from the local to the national development agenda, and should have enabling environment (administrative, fiscal, and legal procedures) for successful implementation of such community adaptation-based projects, but there is a lack of how this should be done. Building on current Cambodia decentralization/de-concentration policy, it is appropriate that the institutional coordination mechanism should be placed in the commune administrations. The CSOs and NGOs should share the project progress and M&E report with both communes and development partners. Since the community-based projects, be it development or climate change measures, are often developed to meet the local needs as such involving commune clerks, private sector and communities, creating M&E coordination mechanism at the commune level would be the right option. The PDP however can provide support in terms of training and guidance as it is used to do on the commune database. The provincial line departments may assist verify the consistency of data collection and assure data quality. The adaptation indicators of CBFI can be aggregated at the district level, perhaps during the district integration workshop. This can be tested, refined and improved over time. Capacity building must target both commune councils and the CSOs to ensure that they have common understanding and mutual benefits of such mechanism.

v) Developing **and Selection of Adaptation Indicators**

- Adaptation indicators are developed to measure project progress at the activity, output, outcome and impact level (Figure 4). It is important to note that adaptation indicators for small CBA projects measure mainly the progress of activities and outputs (PI and UNDP SGP), with a less focus on outcome and impact level due to short project life. A number of considerations are suggested as the ingredients for good practice.
- The simple Log-frame table (table 5) can be used to develop relevant adaptation indicators according to the project objectives and outputs, and it is critical for the M&E specialist and project manager understand the proposed adaptation interventions and the expected results. Each indicator should have clear definition, baseline and target, method of measurement or source of data, frequency of measurement, and responsibility.

Table 5: Sample Log-frame

Outcome/ Objective/ Output	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks

- The design and selection of adaptation indicators, including baselines, should be conducted through participatory process involving stakeholders and affected communities. It is desirable the adaptation/resilience indicators should contribute to the provincial development objectives/goals, which eventually link to the goals of the National Development Strategic Plan. VRA and Quality Based Survey can be used to define baselines and the results should be verified against the existing sub-national data such as commune database, population census, and loss and damage database.
- At least a few immediate outcome indicators can be proposed during project life, for example yield of new rice varieties or new seeds, % of people adopting new climate smart agriculture technologies, coverage of EWS, % of people with diversified crops/income…etc. It is worth noting that impact indicators can be measured after the project completion, therefore it would be difficult for CSOs to follow up and it would be better vested with the parent funding agencies and commune councils.
- Qualitative or process indicators can complement quantitative indicators, especially for tracking outcome, impact level, and final project valuation. For example, the perception of climate risks by communities, the relevance of project design, and sustainability of adaptation technologies can be collected through questionnaires, focused group discussions or quality-based surveys (QBS).
- A number of possible adaptation and resilience indicators are illustrated above by regional practice, which can be refined and adapted for CBAs in Cambodia (sea section II).

vi) Data collection and monitoring

Data collection is required at the beginning of project design using VRA tool or other tools such as rapid rural appraisal, which can produce values and findings for planning as well as constructing baselines and targets to be achieved during the project period. The cost for VRA is about US$ 500 which is provided by UNDP SGP on the top of the total project budget. Involvement of community and stakeholders[2] in

[2] Too many stakeholders implicate cost as experienced by CSOs of UNDP SGP.

monitoring the project implementation and the project results in terms of outputs and outcomes can generate reliable and more objective information about the project performance, relevance and the challenges. The data collection methodologies to update adaptation indicators should be consulted with line departments and verified against commune database, NCDM database, and census.

The UNDP partners conduct VRA to target 3 groups: local authorities, the female, and male group, which can be a good practice to understand the possible differentiation and commonality of perceptions and climate response by these different groups. However, focused groups of specific economic activity such as farmers, fishermen and processing factories can be consulted to get additional information for the project, if the budget is allowed, although limited budget for VRA and surveys is one of the challenges encountered by small CBAs.

vii) Evaluation and Reporting

There is no clear guidance on project evaluation for CBAs, although CSOs oblige to submit the project completion report at the end of project implementation. Several project evaluation guidelines have been developed by development partners and funding agencies such USAID, OECD, WB and GEF/UNDP. We recommend the GEF tool be used as a possible tool for evaluation of the CBA projects (table 6).

Table 6: Criteria for Evaluation of Project Performance

Criteria	Subjects of Analysis
Relevance	The extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time. The question of relevance can look at whether the objectives of an intervention or its design are still appropriate given changed circumstances.
Effectiveness	The extent to which an objective has been achieved or how likely it is to be achieved.
Efficiency	The extent to which results have been delivered with the least costly resources possible; also called cost effectiveness or efficacy.
Results	The positive and negative, foreseen and unforeseen changes to and effects produced by a adaptation intervention. In GEF terms, results include direct project outputs, short to medium-term outcomes, and longer term impact including global environmental benefits, replication effects and other local effects.
Sustainability	The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion. Projects need to be environmentally, as well as financially and socially sustainable.

Source: UNDP, March 2011, “UNDP EVALUATION GUIDANCE FOR GEF-FINANCED PROJECTS”.

The quality-based survey and focused group meetings through participatory process can be conducted to obtain the inputs and feedback on the criteria, including recommendations for future projects.

IV. Conclusion and Recommendations

A wide range of good practices for integration of adaptation indicators has been implemented by local CSOs and regional organizations which serve a knowledge and learning platform for monitoring specific

community-based adaptation projects. There is no one size fit for all practice, each CBA can opt the suited M&E Framework and the indicators according to the adaptation and resilience priority and country circumstances (ecosystem, community, adaptation technologies, socio-economic and fiscal policy, and decision-making process). Some conclusions are drawn below.

1. To make use of existing monitoring and evaluation systems to the extent possible, particularly by adapting to the national M&E Result Framework comprising at least three levels: output, outcome and impact.
2. The Vulnerability Reduction Assessment (VRA) is an important tool for both planning of CBA projects as well as a tool for baseline data collection at the beginning of project implementation and project evaluation at the end.
3. A mix of quantitative, qualitative and narrative tools be used, including sample surveys and scorecards, so that results can be triangulated to provide the reliable assessment on tangible outputs and outcomes towards enhanced adaptation and resilience associated with the climate risks involved.
4. Stakeholder engagement at all levels and across relevant sectors can improve M&E design, data sharing and communication of knowledge and lessons learned on CBA success and effectiveness.
5. Although the community focused investments are associated more to the community level, the design of projects and M&E of adaptation must agree on mechanisms, institutions and criteria, including roles and responsibilities (DPs, local government, CSOs, national institutions) for monitoring and evaluation, which may relate to the households, the local governments, and the national institutions.
6. Enhancing outcome-based indicators is probably desirable to allow for an assessment of the effectiveness of the adaptation measures.

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Annex 1: Selection Criteria

Box 1: Selection Criteria by Plan International

Executive Summary	5%
Project Description	20%
Beneficiaries	20%
Management (+ staff bios and most recent annual or project report as attachments)	20%
Coordination and Collaboration (+letter of support attachments)	5%
Sustainability, CC Mainstreaming & Innovation (+ any co-financing document attachment)	5%
VRA Analysis Report	5%
Logframe	5%
Workplan	5%
Budget	10%
TOTAL	**100%**
+ EXTRA Tie-breaker if needed (geo distribution,research track record, media & IEC use)	*3x10%*
Criteria for elimination: A. Application is not in English (VRA report attachment can be in Khmer) B. If length of main body of the proposal excluding attachment exceeds 10 pages C. Scores on: Project Description, Project Management, Coordination and Collaboration, VRA Report, Workplan, Budget are 2 or less D. Project concept is not gender sensitive E. If the attachment showing letter of support from authorities is not included F. If commitment to reporting, participation, and knowledge generation boxes in final	

Source: Planning International 2016.

Table 7: Selection Criteria by UNDP Small Grants

No	Criteria	Score
1	Clarity of activities, outputs/impacts and Indicators	20%
2	Community Participation and Contribution	20%

3	Project implementing capacity[3]	10%
4	Innovations in adaptive capacity[4]	10%
5	Impact on adaptive Capacity or reduction in vulnerability	20%
6	Impact on Livelihoods	10%
7	Impact on vulnerable people (elderly, children…)	10%

Annex 2: Target Commune by ADB Civil Society Supporting Mechanism

Table 8: Target communes by 19 CSO projects

CSOs	Province	District	Commune	No.
CMDP	Battambang	Battambang	Tuol Ta Aek	1
		Battambang	Rotanak	2
LI	Battambang	Sangke	Voat Ta Muem	3
OC	Banteay Meanchey	Phnum Srok	Ponley	4
		Phnum Srok	Poy Char	5
		Phnum Srok	Nam Tau	6
		Phnum Srok	Spean Sraeng	7
LEC	Kampong Chhnang	Baribo	Trapeang Chan	8
		Baribo	Chak	9
LWD	Kampong Speu	Oudongk	Yutth Sameakki	10
		Oudongk	Prey Krasang	11
		Aural	Ta Sal	12
		Aural	Trapeang Chour	13
KSCF	Kampong Speu	Phnum Sruoch	Kiri Voan	14
CWDCC	Kampot	Teouk Chhou	Trapeang Sangke	15

[3] the nature of organization, members of staff and management and M&E strategy.
[4] project tries to test or introduces new techniques or technologies which enhance adaptive capacities while being simple to use and implement.

		Tuek Chhou	Koun Satv	16
		Tuek Chhou	Preaek Tnoat	17
CRF	Kandal	Kandal Stueng	Trea	18
		Kandal Stueng	Preaek Roka	19
KWWA	Kracheh	Chetr Borei	Bos Leav	20
		Snuol	Srae Char	21
MIPAD	Mondul Kiri	Saen Monourom	Romonea	22
		Pech Chreada	Pu Chrey	23
SKO	Phnom Penh	Mean Chey	Boeng Tumpun	24
		Mean Chey	Stueng Mean chey	25
		Mean Chey	Chak Angrae Leu	26
		Chbar Ampov	Chhbar Ampov Pir	27
WOMEN	Prey Veng	Ba Phnum	Theay	28
		Peam Ro	Prey Kandieng	29
BK	Pursat	Bakan	Me Tuek	30
		Kandieng	Srae Sdok	31
		Phnum Kravanh	Prongil	32
CEPA	Ratanak Kiri	Veun Sai	Ka Choun	33
		Veun Sai	Phnum Kok	34
		Andoung Meas	Nhang	35
		Andoung Meas	Ta Lav	36
HURREDO	Siem Reap	Soutr Nikom	Khnar Pou	37
		Soutr Nikom	Chan Sa	38
		Angkor Thum	Peak Snaeng	39
SSF	Preah Sihanouk	Preah Sihanouk	Kaoh Rung	40
CRDT	Stung Treng	Siem Bouk	Srae Krasang	41
		Siem Bouk	Kaoh Preah	42
		Siem Bouk	Ou Mreah	43
		Thala Barivat	Sam Ang	44
		Thala Barivat	Chamkar Leu	45

SP	Takeo	Tram Kak	Trapeang Kranhoung	46
		Tram Kak	Trapeang Thum Khang Cheung	47
		Tram Kak	Trapeang Thum Khang Tboung	48
		Tram Kak	Ou Saray	49
CRID	Tboung Khmum	Ponhea Kraek	Dountei	50

Annex 3: Example of CBA Projects of Package B

Table 9: Selected Community Based Adaptation Projects with key indicators Supported by Package B

No	Name of CSO	Name of Project	Project Location	Key Objectives	Outputs/Results	Log-Frame Indicators
1	WOMAN (Women Organization for Modern Economy and Nursing)	Strengthening Community and Local Authority Participation in Climate Change Adaptation and Disaster Risk Reduction in Prey Veng (SCALP&DRR-PV)	Theay and Prey Kandieng communes, Ba Phnum and Peam Ro Districts, Prey Veng province	1. To improve sustainable water management through rehabilitation of water storage infrastructure, better water supply management, and more efficient and effective water uses in agriculture, in households and in livelihoods 2. To promote alternative livelihoods for women to reduce their dependence and economic activities that are climate sensitive, through improving and establishing women-led social enterprise, thus enhancing women's	Result 1: Two community ponds rehabilitated for storing water for use by farmers, households, for community fish farming and for home gardening Results 2: Three agriculture demonstrations were introduced and will be scaled up throughout the entire target communities Result 3: Farmers know how to do post-harvest management techniques for keeping and selecting variety of seeds resilient to CCA and greater uses of seeds resilient to climate change in the target areas Result 4: Farmers have access to climate information to support farmers for planning	Indicator 1: # of households using water from project ponds) for agriculture, for various uses Indicator 2: # hectares of rice field using supplementary irrigation from pond during wet season. Indictor 3: # of ha of non- rice crop (cash crop, cucumber, watermelon…) using water from pond (indicate by season) Indicator 4: # of hh using pond for fish-farming Range of daily fish catch levels). Indicator 5: % of target beneficiary households where practices from demonstration plots are newly adopted by farmers outside

				livelihood diversification and economic empowerment. 3. To mainstream climate change adaptation and mitigation measures into the commune budgeting and planning and to increase women's and children's empowerment and participation in the commune investment plan development processes. Children especially receive better interventions and responses from the commune authorities as a result.	their seasonal plants Result 5: Women-led groups received skills and knowledge on animal feed production and management of their social enterprise Result 6: Women entrepreneur groups are sustainable and financially self sufficient Result 7: Commune authorities included community-based product specialization supports and knowledge into the CIP/CDP Result 8: Women and children representatives participated actively in CCWC monthly and quarterly meetings to advocate CCA and DRR issues for inclusion into the Commune Investment Plan (CIP) Result 9: Children, youth and teachers receive skills and knowledge on and rowing boats Result 10: Children and youth actively participated in CCA and DRR and advocate the issues into CIP Result 11: Kampong Slaeng primary school is protected from flood by newly build dykes	Indicator 6: # of target beneficiary households using seed varieties suitable given national weather forecasts Ind 7: % of farmers use climate Information Ind 8: # of women who diversify their economic activities by adding at least one income source or value adding Ind 9: # of women which increase, modify or start new activity as a result of the training. Indicator 10: # of self-help women's groups Indicator 11: # of issues raised by women and children during CCWC meetings during the project life, and which end up reflected in the CIP. Indicator 12: % of children (boys and girls) in schools who can swim in deep water Indicator 13: % of youth in schools who can swim in deep water Indicator 14: % of teachers who can swim in deep water Indicator 15: # children (boys and girls) participate in child club CCA/DRR trainings high and duration of floods in school area

2	SP (Sovann Phoum)	Innovation for Community-based CCA/DRR Alternatives	Kra Nhoung, Trapaing Thom Khang Cheung, Tapaing Thom Khang Tbong, and Osaray ; Tramkak district, Takeo province	Enhancing adaptive capacity of communities to improve livelihoods and make available water sources in Tramkak district, Takeo province resulting from climate changes	Result 1: Community local chicken technically raised to adapt to climate change in order to generate additional incomes. Result 2: Green energy in water supply by solar pump introduced. Result 3: The culture of community vegetable gardening re-activated. Result 4: CCA and DRR knowledge products documented and shared.	Indicator 1: % communities have knowledge on and better livelihoods from local chicken raising and vegetable gardening. Indicator 2: # households access to water for households Indicator 3: # students access to safe water at schools and their homes Indicator 4: % families of project consuming three meals a day R1a. # community chick producing center will supply healthy chicks to farmers in 4 communes R1b. # model farmers raised local healthy chickens as successful model in 20 villages. Chicken dead is no longer an issue in the target villages. R2a. Around 500 households access clean pipe water supply system. R2b. # schools have automatic water supply and safe drinking water in each classroom are in place using green energy. R3a. # model community vegetable farm is in place for learning R3b. # school gardens for students life skills and nutrition knowledge are in place R3c. % of households in 20 villages have home gardens.

						R4a. villagers in 20 villages can explain about CCA/DRR after receiving CCA/DRR awareness raising sessions R4b. # case studies on successful Community-based CCA/DRR documented and shared widely. R4c. # short videos on successful Community-based CCA/DRR documented and shared widely.
3	LEC (Live & Learn Environmental Education Cambodia)	Building Community Resilient Pathways through Innovations and Improved Adaptive Capacity	Trapaing Chan commune and Chak Commune, Boribo District, Kampong Chhnang Province	**Objective 1:** To enhance sustainable agriculture productivity through improvement of small scaled irrigation infrastructure and innovation **Objective 2:** To strengthen adaptive capacity of farmers to adapt with climate change and climate related disaster risks	**Output 1.1:** Innovative infrastructures are introduced and employed by farmers - 01 innovation (bio char systems) is trialed and tested in rice farming, vegetable cropping and fruit trees plantation - 60 farmers (households) have trialed innovation - At least 1 resilient system (climate proof) is rehabilitated **Output 1.2:** Climate smart and sustainable farming practices are introduced and adopted by farmers - At least 3 innovative practices on climate smart agriculture or sustainable agriculture are applied - 300 farmers are trained about practices climate smart or sustainable agriculture, and 30% of them deployed either	Indicator 1: Yields (rice) are increased Indicator 2: Food production is diversified and increased in farming activities Indicator 3: Increased in cropping cycles Indicator 4: Improved farming practices Indicator 5: Improved knowledge on CCA/DRR Indicator 6: CCA/DRR activities are mainstreamed in CIPs with reasonable budget for implementation Result Level Indicator 7: Number of innovation (bio char) are tried and tested in rice farming, vegetable cropping and fruit trees plantation Indicator 8: Number of farmers (households) tried innovation Indicator 9: Number of irrigation system rehabilitated

					practice introduced by the project - 3 fruit tree nurseries are setup and managed by individual households, with condition to share with other farmers **Output 2.1:** Knowledge about CCA/DRR are enhanced among participating communities - 15 focal points for capacity development are trained through TOT approach - 1,000 people have their awareness on climate change/DRR raised - Knowledge products or awareness raising materials about innovation/technology and practices which enhance resilience are produced and disseminated **Output 2.2:** Climate change and DRR are mainstreamed into development plan	Indicator 10: Number of innovative practices on climate smart agriculture or sustainable agriculture applied Indicator 11: Number of farmers trained about practices climate smart or sustainable agriculture Indicator 12: Percentage of them deployed either practice introduced by the project Indicator 13: Number of tree nursery setup and managed by commune councilors Indicator 14: Number of focal points for capacity development trained through TOT Approach Indicator 15: Number of people reached Indicator 16: Percentage of people have their awareness on climate change/DRR raised Indicator 17: Number of knowledge products or awareness raising materials aboutninnovation/technology and practices which enhance resilience are produced and disseminated Indicator 18: Number of members of commune councils and district planning in-charge officer trained Indicator 19: Number of CCA/DRR activities integrated into CIPs and DIPs for 2017,

						with appropriate fund allocation for implementation
4	Bandos Komar (BK)	Friendly school and community on Climate Change Mitigation and Resilience (CCMR)	Vulnerable children and people in rural community in Pursat Province	Schools and communities are more climate friendly and climate resilient	Result 1: Friendly approach on climate change on mitigation and resilience (CCMR) is mainstreamed in communities Result 2: Target farmers implements the friendly technology of agriculture innovations Result 3; Mainstreaming climate change in school curriculum is encouraged among educators	
5	Community Managed Development Partners (CMDP)	Strengthening capacities and institutions of local actors for mainstreaming climate resilience into development plan in Battambang.	Informal settlements in Battambang Municipality, Battambang province	1.Improve the performance and physical condition of drainage infrastructure in flood-prone neighborhoods in the target area 2. Develop local human resources through the support and strengthening of an Urban Community Resource Center (UCRC) to research, document and provide technical support to communities, local officials and possibly private sector for better understanding of climate resilience concept and identification of resolution at local level.	Result 1: Target communities, local authorities and specialized offices agreed on wastewater master plan, design and cost estimate of main drainages to ensure that design standards pertaining to drainage systems reflect changes in future expected discharge. Result 2: UCRC team develops knowledge product (guidance note) on drainage rehabilitation and train/guide communities and local authorities on mainstreaming CCA/DRR into CIPs/CDPs. Result 3: Communities' CCA and DRR action plan are integrated	Indicator 1: 190 m of functional main public drainage system. Indicator 2: # of meters of functional drainage in communities Indicator 3: 3 UCRC team members increasing skills and knowledge to provide technical support to develop drainage master plan, cost estimate and design for internal and external infrastructure development. Indicator 4: Operation & Maintenances plans and guidance Note are in placed. Indicator 5: One Wastewater Master Plan agreed by target community and local authority.

				3. Apply a model based on Public -People Partnership promoting mutual understanding and sharing of responsibilities regarding main, secondary and tertiary infrastructure and services ("Component Sharing") between authorities, NGOs, and local residents through inclusive, decentralized and de-concentrated approaches.	in CIPs/CDPs by target communities and local authorities. Result 4: Target communities and local authorities have better coordination through Sangkat-Community Regular bi-monthly meetings.	Indicator 6: Two designs and cost estimates of main approved. Indicator 7: Two main drainages in Sangkat Ratanak, and Sangkat Toul Ta Ek in Battambang Municipality constructed. Indicator 8: Numbers of training conducted to communities and local authorities and # of separate individuals participate during the life of the project. Indicator 9: Numbers of meetings and workshops organized with communities and local authorities and # of separate individuals participate, during the life of the project. Indicator 10: At least 2 Communities' CCA and DRR action plan are prepared and integrated in CIPs/CDPs. Indicator 11: Number of bi monthly meeting between community members and local authorities. Indicator 12: Number of relevant issues raised by community members in Sangkat/ Community Regular bi- monthly meetings.

6	Child Rights Foundation (CRF)	Enhanced Children's and Youth's Accountability in Climate Change Adaptation.	Trea and Prek Roka communes, Kandal Stueng district, Kandal Province, Cambodia	SO1: To sensitize children, youth and school and local authorities in target communities with knowledge of climate change and its negative impacts. SO2: To provide children and youth in targeted communities with the knowledge and skills needed to secure sustainable, drought-adaptive livelihoods.	Result 1.1: Through school curriculum, children attain MoEYS-standard levels of knowledge on CCA and DRR. Result 1.2: Increased understanding and prioritization of CCA and DRR by schools and local duty bearers. Result 2.1: Secondary school curriculum prepares youth for local careers in sustainable, drought-resistant fields. Result 2.2: Improved school CCA/DRR practices in water sustainability and sanitation and food security serve as model for households in targeted communities.	Indicator 1: Number of vulnerability to climate change ranking during VRA reduced over the project life cycle. Indicator 2: On average, less than 60% of beneficiaries report a feeling of hopelessness about climate change Indicator 3: 10% reduction in beneficiaries identifying lack of cooperation from authorities as a barrier to CCA/DRR Indicator 4: % of children and youth in school targets enhance capacity on CCA/DDR to tackle barrier of adaptation in the VRA ranking. Indicator 5: 195 secondary students empowered with life skills and/or vocational training Indicator 6: 20% reduction in beneficiaries identifying lack of technical skills and/or knowledge as a barrier to CCA/DRR Indicator 7: 6 target schools attain water sustainability Indicator 8: 6 target schools provide children with hands-on knowledge of sustainable agriculture during lessons in school vegetable garden Indicator 9: 6 school action plans developed

						Indicator 10: At least 2 of DRR initiative in school has integrated in CIP

Annex 4: CBA/DRR themes implemented by CSO/PI

Table 10: Specific CCA/DRR themes/instruments by CSO partnering with PI

Name of CSO	Project Name	Building Adaptive Capacity						Integrating into Com. Development Plan	Adaptation Option/Measures							
		Coordination	Vulnerability Assessment	Resilience/adaptive Capacity Building	EWS CC Information	Awareness	School Curriculum	CC Planning /Mainstreaming in CDP/ CIP	DRR	Drought Related CBA	Flood related CBA	Agriculture & Fisheries Resilience Livelihood	Environment Conservation Waste Mngt	Irrigation related infrastructure Access to water	Health/ sanitation	Finance/Insuranc
Bandos Komar Association (BK)	Friendly school and community on Climate Change Mitigation and Resilience (CCMR), in Pursat		X	X	X	X	X	X	X	X		X		X		
CEPA	Building adaptive capacity and resilience to floods and droughts in indigenous and minority communities In Rattanakkiri		X	X	X			X	X		X	X				
CMDP	Strengthening capacities and institutions of local actors for		X	X				X			X		X			

	mainstreaming climate resilience into development plan in Battambang.															
Cambodian Rural Development Team (CRDT)	Promoting climate change resilience among smallholder farmer communities along the Mekong River, Thalaborovath, Stoeng Treng		X	X				X		X		X		X		X
Child Rights Foundation (CRF)	Enhanced Children's and Youth's Accountability in Climate Change Adaptation. Kandal province		X	X		X	X	X		X			X		X	
Community Resource Improvement for Development (CRID)	Improve Capacity of Vulnerable Community, especially women and girls, and Local Authorities for adapting to Climate Change and Disaster in Doun Tei commune. (Tbong Khmum)		X	X		X		X		X		X	X	X		
CHILDREN AND WOMEN DEVELOPMENT CENTER IN CAMBODIA (CWDCC)	Increase food security through sustainable coastal fisheries management and climate change adaptation, Kampot		X			X		X				X	X			
(HURREDO)	Mainstreaming Climate Change Adaptation into the Community and Livelihood Improvement (MCCACLI) Siem Reap		X	X		X		X				X		X		X X
Kraing Serei Community Forestry (KSCF)	Enhancing Kraing Serei Community Resilience to Extreme Weather Events in Kampong Speu		X	X		X			X	X		X	X	X		X
Kampuchea Women's Welfare Action (KWWA)	Empowering Communities to Adapt to Climate Change (ECACC), Kratie Gender is also included.		X	X		X		X		X		X		X		
Live & Learn Environmenta	Building Community Climate Resilient Pathways through		X	X				X		X		X		X		

l Education Cambodia	Innovation and Planning in Kampong Chhnang															
Learning Institute (LI)	Enhancing Climate Change Adaptation Capacity of Rural Communities living in Voat Ta Muem Commune, Sangkae District, Battambang Province, Cambodia	X	X	X				X		X				X		
Life With Dignity (LWD)	Climate Smart Livelihood Improvement Project (CSLIP) Kampong Speu		X			X	X	X				X	X	X		X
Mondulkiri Indigenous People's Association for Development (MIPAD)	Indigenous People Communities' Climate Change Adaptation and Disaster Risk Reduction in Mondulkiri Project, (IP-CCA) Senmonorum		X			X	X	_	X			X		X		
Ockenden Cambodia (Ockenden/OC)	Improving resilient livelihoods of vulnerable communities in Phnom Srok district, Banteay Meanchey province		X	X				X		X		X		X		
Samatapheap Khnom Organization (SKO)	Community-led Climate Change Adaptation for Urban Poor Communities, Phnom Penh		X			X					X					X
Sovann Phoum (SP)	Innovation for Community-based CCA/DRR Alternatives in Takeo		X			X				X		X				
Song Saa Foundation, SSF	Koh Rong Climate Change Adaptation Initiative (KRCCA)		X			X					X		X			
Women Organization for Modern Economy and Nursing (WOMEN)	Strengthening Community and Local Authority Participation in Climate Change Adaptation and Disaster Risk Reduction in Prey Veng (SCALP&DRR-PV)		X		X	X	~~X~~	X			X	X		X		
	Total Number	1	18	12	3	13	4	14-15	4	3	5	14	7	13	1	5

Annex 5: Example of Log-frame indicators of some CSOs

Table 11: Log-frame table for SP Project "Innovation for Community-based CCA/DRR Alternatives"

Intervention logic	Indicator	Baseline	Target	Sources and means of verification
Overall Purpose: The purpose of this project is to build capacity of SP to implement and articulate into the long term operation the innovative community-based CCA/DRR activities.	The innovative community-based CCA/DRR will be an expertise of SP and will reflect in the long-term strategy at the end of the project to improve the adaptive capacity of target communities.	SP's long term strategy and priorities community-based CCA/DRR are not included.	One prioritized area will be community-based CCA/DRR in SP Strategic Plan.	The SP Strategic Plan 2015-2019
Specific Objectives/Outcomes: Enhancing adaptive capacity of communities to improve livelihoods and make available water sources in Tramkak district, Takeo province resulting from climate changes.	Obj 1a. % communities have knowledge on and better livelihoods from local chicken raising and vegetable gardening. Obj 1b. # households access to water for households Obj 1c. # students access to safe water at schools and their homes Obj1d. % families of project consuming three meals a day	Obj 1a. Not available Obj 1b. 0 Obj 1c. 0 Obj. 1d 0	Obj 1a. 30% Obj 1b. 500 Obj 1c. 3,791 Obj 1d. 90%	

Expected Results: Result 1. Community local chicken technically raised to adapt to climate change in order to generate additional incomes.	R1a. # community chick producing center will supply healthy chicks to farmers in 4 communes R1b. # model farmers raised local healthy chickens as successful model in 20 villages. Chicken dead is no longer an issue in the target villages.	R1a. 0 R1b. All farmers raise local chickens but traditional way.	R1a. 1 R1b. 20	R1a. Field visit, reports R1b. Field visit, reports
Result 2. Green energy in water supply by solar pump introduced.	R2a. Around 500 households access clean pipe water supply system. R2b. # schools have automatic water supply and safe drinking water in each classroom are in place using green energy.	R2a. 0 R2b. 0	R2a. 500 R2b. 3	R2a. Field visit, report R2b. Field visit, report.
Result 3. The culture of community vegetable gardening re-activated.	R3a. # model community vegetable farm is in place for learning R3b. # school gardens for students life skills and nutrition knowledge are in place R3c. % of households in 20 villages have home gardens.	R3a. 0 R3b. 0 R3c. 5%	R3a. 1 R3b. 3 R3c. 30%	R3a. Field visit, report R3b. Field visit, report R3c. Field visit
Result 4. CCA and DRR knowledge products documented and shared.	R4a. villagers in 20 villages can explain about CCA/DRR after receiving CCA/DRR awareness raising sessions R4b. # case studies on successful Community-based CCA/DRR documented and shared widely. R4c. # short videos on successful Community-based CCA/DRR documented and shared widely. R4d. # SP long term strategic intervention reflects CCA/DRR	R4a. 0 R4b. 0 R4c. 0 R4d. 0	R4a. 20 R4b. 3 R4c.3 R4d. 1	R4a. Interview, Reports R4b. Case studies R4c. videos R4d. Strategic plan, future proposals.

Table 12: LOGICAL FRAMEWORK-Bondos Komar Association

Intervention logic	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks
Specific Objectives: Schools and communities are more climate friendly and climate resilient.	• # of environment friendly schools be come to level A (A:green school environment; B: Medium has some tree and garden but not so green; C: Has few tree or garden but not green) • # of schools has planning to mitigate and respond on any form of disasters • % of parents are aware of CCMR • % of CCDMs /VDMGs are well functioned	• 0 • 0 • 20% (VRA report) • 40% (consultative workshop)	• 10 • 10 • 70% • 70%	• Monitoring report • Annual report	Risk: • The respective communal and parliamentarian election schedule might affect children education in BK target Area. Risk Management: BandosKomar keeps eyes on the schedule of commune and parliamentarian election and prepare clear action Plan to cope with this event. Risk: • School and Community's beliefs and practices are barriers to sensitize the issue of climate change, mitigation and resilience because they are adapted living condition with safe environment for long in Cambodia. Risk Management:
Expected Outputs/Results: Climate smart approaches for climate change mitigation and		0	42	Quarterly monitoring report Training report	

Intervention logic	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks
resilience (CCMR) and DRR are mainstreamed into communities' activities. Target farmers implements the friendly technology of agriculture innovations Mainstreaming climate change and DRR in school is encouraged among educators.	# of core parent5 attend training on CCMR and DRR % of core parents are able to share CCMR and DRR concept to their members in community # of farmers are able to select rice seed and vegetable to adapt with short period of drought (climate change) # of schools are mainstreaming CCMR into school curriculum and functioned # of children council educated on CCMR to their classmate % of children aware of CCMR	0% 0 0 0 15% (VRA report)	80% 110 10 15time/school/18 months 70%	Quarterly report Monitoring report School director record Children council recode Quarterly report	BandosKomar closely works with local authority, community, and other stakeholders through BandosKomar's project activities to raise awareness of issue of climate change, mitigation and resilience in community and motivate school to apply school curriculum of climate change, mitigation and resilience.
Result 0: Preparatory Activities					
Launching and start up workshop	# of workshop # of participants	0 0	1 56	Workshop report	
Semester meeting with concerning provincial departments, CCs/CCDM, DCDM, PCDM and BK and Plan.	# of semester meeting was done # of participant	0 0	2 22/ meeting	Semester meeting minute and attendant list	
Conduct VRA (endline)	# of VRA report	1	2	VRA report	

[5] Core parent: existing group and new formed. the core parent group were formed from parent with child aged 0-18 years old

Intervention logic	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks
Result 1. Friendly approach on climate change on mitigation and resilience (CCMR) and DRR is mainstreamed in communities.					
Activities:					
Review/re-activate the existing CCDMs and VDMGs	# of meeting # participant	0 0	3 (1 time/CC) 27/time	Meeting minute and list of CCDMs/VDMGs	
Conduct training on CCMR and DRR concept and including first aid and role responsibility to CCDMs and VDMGs	# of training # of participant # of trainer	0 0 0	2 25/training 2	Training report	
Conduct awareness raising on climate change, mitigation and resilience (CCMR) and DRR to community	# of awareness # of participant # of resource person	0 0 0	10 by village 1	Awareness report	
Review/develop and reprinting IEC materials related to CCMR and DRR	# of poster # of leaflet	0 0	1000 2000	Monitoring report Distribution list	
Conduct training on CCMR (DRR and CCA) including using IEC for meeting with their group and first aid to core parent groups.	# of training # of core parent	0 0	1 26	Training report	
Support existing early warning system(EWS) for well-	# of loud speaker	0	3	Field staff report Monitoring report	

Intervention logic	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks
functioning through support loud speaker in commune/community and link this activity to the early warning system being developed by the SPCR project at the province .				Distribution list	
Conduct simulation of EWS to test functioning and role responsibility of CCDM and VGDMs to respond disaster	# of simulations # of participant	0 0	3 35/time	EWS simulation report	
Encourage commune council to put high priority on climate change issues into CIP/CDP through capacity building and participate in the CIP/CDP process form project staff	# of meeting # of community raised on CCMR issues into CIP # of activities related to DRR&CCA appear in CIP&CDP	0 0 2	10 10 at least 3/CC/year	Meeting minute Field staff report Monitoring report CIP/CDP book	
Result 2: Target farmers implement the friendly technology of agriculture innovations					
Establish home gardening/nursery and support seeds` with drought-tolerant	# of home garden/nursery established and well functioned	1	20 (19 new)	Field staff report Monitoring report	

Intervention logic	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks
vegetable crop varieties and some functioning material				Material distribution list	
conduct training on vegetable growing and tree planting to resilience with climate change especially drought-tolerant vegetable crop varieties to selecting famers/target farmers	# of training # of farmer	0 0	2 20	Training report Quarterly report	
Conduct awareness raising on rice production to adapt and resilience with climate change especially drought-tolerant vegetable crop varieties to community	# of awareness raising # of participant	0 0	10 300	Awareness report	
Refresher training to village livestock agents (VLAs) and support some functioning materials	# of training # of kits delivered to VLAs	0 0	1 10 (1 each)	Training report Distribution list	
Canal rehabilitate	# of canal # of meter # of beneficiary	1 0 0	1 1100m rehabilitate 716 (376 Female)	Meeting minute Field staff report Monitoring report	
Result 3. Mainstreaming climate change in school curriculum is encouraged among educators.					

Intervention logic	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks
Activities:					
Conduct training on CCMR (DRR & CCA) including first aid to teachers includes school director (SD) and school support committees (SSCs).	# of training # of teacher and school principle # education officer # of resource person	0 0 0 0	1 111 4 2	Training report and attendant list	
Conduct training on CCMR (DRR&CCA) including first aid to children council	# of training # of children # of teacher point person	0 0 0	10 250 20	Training report	
Consultative workshop on mainstreaming and reinforce DRR &CCA in school curriculum with PoEYS, DoEYS, PoE, PCDM and school directors	# of workshop # of participant # of resource person	0 0 0	1 24 4	Workshop report	
Distribute text/story books and IEC material related CCMR (DRR&CCA) to schools	# of school received story books and IEC materials	0	10	Field staff report Monitoring report Distribution list	
Support functioning materials, especially first aid kit for children councils to re-activate their activities.	# of kits refilled	0	10	Field staff report Monitoring report Distribution list	
Mainstream green school concept & support materials	# of meeting # of school supported	0 0	10 10	Meeting minute Field staff report	

Intervention logic	Indicator	Baseline	Target	Sources and means of verification	Assumptions /Risks
	# of environment day # of competition	0 0	10 10	Monitoring report	
Drawing contest / SCs drawing focused on CCMR and DRR.	# of drawing contest	0	10 (1/schools)	Field staff report Monitoring report	
Establish bio-garden/nursery especially drought-tolerant vegetable crop varieties in school and support materials	# of school bio-gardens established and supported	0	10	Field staff report Monitoring report Distribution list	
Conduct tree planting day	# of event # participant	0 0	3 250	Field staff report Monitoring report Event report	
Set up and or rehabilitate water system in school	# of school set up/rehabilitated water system	0	10	Field staff report Monitoring report	

Table 13: Excerpt of Log-frame of CoDec “Conservation of Community Forest to enhance Community Livelihoods"

Intervention	Indicator	Baseline	Target	Sources and means of verification
Overall Purpose: Promote empowerment in management of 3	-80% of community 1636 forestry members, including 830 females are	All community forestry member	80% of community 1636 forestry	Progress report Map

community forests in Tbong Damrei, Ko Koh and Tipor communes and improve livelihoods in three CFs of Santuk District.	aware of REDD+ for forest protection, related laws, gender, agriculture, use of toxic chemicals, small enterprises and forest conservation. -community forestry of Tbong Damrei and Phnom Srouch has forestry management plans with a total area of 921 ha and demarcated boundary.	are not aware of REDD+	members, including 830 females are aware of REDD+ for forest protection, related laws, gender, agriculture, use of toxic chemicals, small enterprises and forest conservation.	Data log and note.