Strengthening Climate Resilience:

The Southeast Asian Experience

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Plan

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CONTENTS

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ACRONYMS

A7	Alliance of Seven
AAC	Action Aid Cambodia
AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACDM	ASEAN Committee on Disaster Management
ADIFE	Association for the Increase in Development of Family Economy
ASEAN	Association of Southeast Asian Nations
BMKG	Badan Meteorologi, Klimatologi, dan Geofisika
BPLHD	Badan Pengendalian Lingkungan Hidup Daerah
CBAT	Community-Based Action Teams
CBNRMC	Community Based Natural Resource Management Committees
CBO	Community-based Organizations
CCA	Climate Change Adaptation
CCC	Climate Change Commission
CCDM	Commune Committee for Disaster Management
CDP	Commune Development Planning
CHRD	Cambodian Human Resource Development
CIP	Commune Investment Plan
CRM	Coastal Resource Management
CSDRM	Climate Smart Disaster Risk Management
CSO	Civil Society Organizations
DCDM	District Committee for Disaster Management
DIPECHO	Disaster Preparedness Program of European Commission's Humanitarian Aid Office
DRAT	Drought Resilient Agriculture Techniques
DRR	Disaster Risk Reduction
HFA	Hyogo Framework for Action
HVCA	Hazard, Vulnerability, Capacity Analysis
HVCR	Hazard, Vulnerability, Capacity and Risk
IASL	Impact, Assessment, Sharing and Learning
ICBRR-CA	Integrated Community Based Risk Reduction – Climate Change Adaptation Programme
ICT	Information and Communication Technology
INGO	International Non-Government Organization
KAFDOC	Khmer Association for Development of Countryside
KAP	Knowledge, Attitude, Practice (KAP) Survey
LGU	Local Government Unit
LWD	Life with Dignity
LWF	Lutheran World Federation
MDRRMC	Municipal Disaster Risk Reduction Management Council
MDRRMO	Municipal Disaster Risk Reduction Management Office
NCCAP	National Climate Change Action Plan
NCDM	National Committee for Disaster Management
NFSCC	National Framework Strategy on Climate Change
NGO	Non-government Organization
PDA	Provincial Department of Agriculture
PDEYS	Provincial Committee for Disaster Management
PMI	Palang Merah Indonesia
PRA	Participatory Rural Appraisal
PVA	Participatory Vulnerability Analysis
REDD	Reducing Emissions from Deforestation and Forest Degradation
SBDRR	School Based Disaster Risk Reduction
SCR	Strengthening Climate Resillience
SIP	School Improvement Program
SOLVE	Strengthening Livelihoods and Reducing Local Vulnerabilities
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
VCA	Vulnerability and Capacity Assessment
VDC	Village Development Committee
VDMG	Village Disaster Management Group

INTRODUCTION

Why the Need for Strengthening Climate Resilience in Southeast Asia

A report on the World Risk Index[1] was recently released evaluating the risk of societies to natural hazards by ranking 173 countries against an analysis of exposure and vulnerability – assessed through indicators for susceptibility, coping and adaptive capacities[2]. Findings highlight how exposed and vulnerable Southeast Asian countries are to natural hazards and escalating climate risks *(see Table 1, next page)*.

Of the five hazards used in the analysis of the risk index (earthquakes, storms, floods, droughts and sea level rise), four were climate-related. The study, thus, affirms the extremely high exposure of Southeast Asia to climate-related hazards. These hazards come in the form of extreme events as well as slow-onset crisis that are challenging the work of disaster risk management and climate change adaptation decision makers in the region.

In 2009, the UNISDR presented a Mortality Risk Index (MRI)[4] as part of the Global Assessment Report on Risk and Poverty in a Changing Climate[5]. Of the top ten countries with the highest mortality risk rank from natural hazards, three were from Southeast Asia – Indonesia, Myanmar and the Philippines. Common to all three countries is the risk of flooding, landslides and drought. Water stresses due to climate change, and heavier rainfall, as experienced in the region in 2011[6], are set to challenge Southeast Asia's development. The World Bank's 2011 East Asia and Pacific Economic Update highlights the impact of flooding in Southeast Asia on economic growth[7]. Nevertheless, as disaster risks increase in Southeast Asia[8], disaster risk reduction (DRR) and climate change adaptation (CCA) efforts also have increased in the region. A recent UNISDR Southeast Asian assessment[9] records an increase in DRR and CCA-related regional initiatives but highlights that Southeast Asia lags behind other regions in terms of the actual number of initiatives being implemented. Moreover, there is an observed unevenness in the attention given to knowledge management, information sharing, awareness-raising, training and research (ie: HFA 3), as compared to the other priorities under the Hyogo Framework for Action on Disaster Risk Reduction[10]. In the mapping of adaptation efforts undertaken by UNISDR in Asia and

Table 1: Rank of Southeast Asian Countries' Risk to Hazards (World Index Report)

Country	Risk Rank (out of 173)	World Risk Index (%)[3]	Exposure (%)	Vulnerability (%)	Susceptibility (%)	Lack of Coping Capacities(%)	Lack of Adaptive Capacities (%)
Brunei	14	14.08	36.28	38.83	13.48	66.06	36.93
Cambodia	9	16.58	26.66	62.18	48.28	86.43	51.81
Indonesia	28	11.68	20.49	57.06	37.66	83.31	50.20
Laos	104	5.80	9.70	59.78	47.38	84.77	47.20
Malaysia	91	6.69	15.59	42.88	20.12	69.45	49.06
Myanmar	57	8.54	14.47	59.02	41.67	79.75	55.62
Philippines	3	24.32	45.09	53.93	34.99	82.78	44.01
Singapore	153	2.85	9.21	30.97	14.60	47.37	30.94
Thailand	85	6.86	14.84	46.25	22.44	76.23	40.10
Vietnam	34	11.21	22.02	50.89	30.82	78.88	42.97
Timor-Leste	7	17.45	25.97	7.17	52.42	89.16	53.93

the Pacific[11], an adaptation continuum was developed (adapted from the World Resources Institute) that ranges from addressing drivers of vulnerability, building response capacity, managing climate risk and confronting climate change. The study classified DRR efforts as attempts at adaptation, and highlighted the danger of maladaptation taking place in the region. The study also reported that climate risk management (i.e. incorporating climate information in decision-making processes of governments and communities) remains a unique concept with minimal attention in the region[12].

Given the changing profile of its climate-related natural hazards, the level of exposure of its rural and urban populations, the vulnerabilities of large numbers of communities aggravated by the changing climate, and the limited capacities of Southeast Asia's populations – better efforts towards climate and disaster resilience is being demanded from governments, their respective citizens and ecosystems.

The Strengthening Climate Resilience programme sought to address this urgent need in Southeast Asia by contributing the regional experience and expertise in the development of the Climate Smart Disaster Risk Management (CSDRM) approach.

This report shares the journey of various actors in Southeast Asia who engaged in the Strengthening Climate Resilience programme's aim of better comprehending the challenges for disaster risk management (DRM) presented by a changing climate. It shares the learning gained from and with several stakeholders (including civil society organizations (CSOs), government bodies at national and local level, and research institutes in the region) on how best to define what climate smart disaster risk management entails. The report presents a brief description of the CSDRM approach and its application in the region. This is followed by a section on the important lessons learnt from validating the CSDRM approach in Southeast Asia; advocating for a CSDRM approach; and conclusions on the evolving face of CSDRM in the region. An annex presents in more detail case studies of the SCR partners in Southeast Asia, and the governance landscape for DRM and CCA policy in the three target countries.

BRIEF DESCRIPTION OF CSDRM

The Climate Smart Disaster Risk Management Approach

The Climate Smart Disaster Risk Management Approach (CSDRM) is described as an approach that supports organisations to think and work in integrated ways. With it you are setting out on an integration journey, a pathway to more joined-up working[13]. It seeks to inform strategic planning, program development and policymaking in order to ensure much needed integration of DRR and CCA. Integrated programmes can more effectively address the underlying vulnerability which renders governments and communities at high risk to the changing climate and other disasters. It is an approach that encourages various stakeholders to look into and tackle changing disaster risks and uncertainties, enable adaptive capacities, and to address poverty and vulnerability and their structural causes. All these are seen as critical measures needed to truly strengthen climate resilience.

The CSDRM approach consists of three pillars divided into 12 action points that are supported by in depth guiding questions *(see Figure 1: The Climate Smart DRM Approach and its Guiding Questions, page 4)*. These can help you assess and reflect on your organisation's work and operational environment in relation to CSDRM. They help you identify your strengths and weaknesses in relation to the 12 action points.

The CSDRM approach not only facilitates the process of analysing whether existing programs and initiatives are climate-smart or not, it also facilitates the identification of pathways for integration that can help institutions in ensuring greater resilience of their planned interventions. *"Changing Climate, Changing Disasters, Pathways to Integration"* a global SCR publication provides guidance on how to use the approach for identifying integration pathways, developing action plans and monitoring and evaluating your move towards integrated policy or programmes. Figure 2 presents the process indicators for each action point, which support planning, monitoring and evaluation, and can be used for advocacy, training and learning. The development of the indicators as presented in Figure 2 was made possible through its contextualisation and validation in Southeast Asia.
(see Figure 2: The Climate Smart DRM Approach and its Process Indicators page 5)

Figure 1: Climate Smart DRM Approach and its Guiding Questions

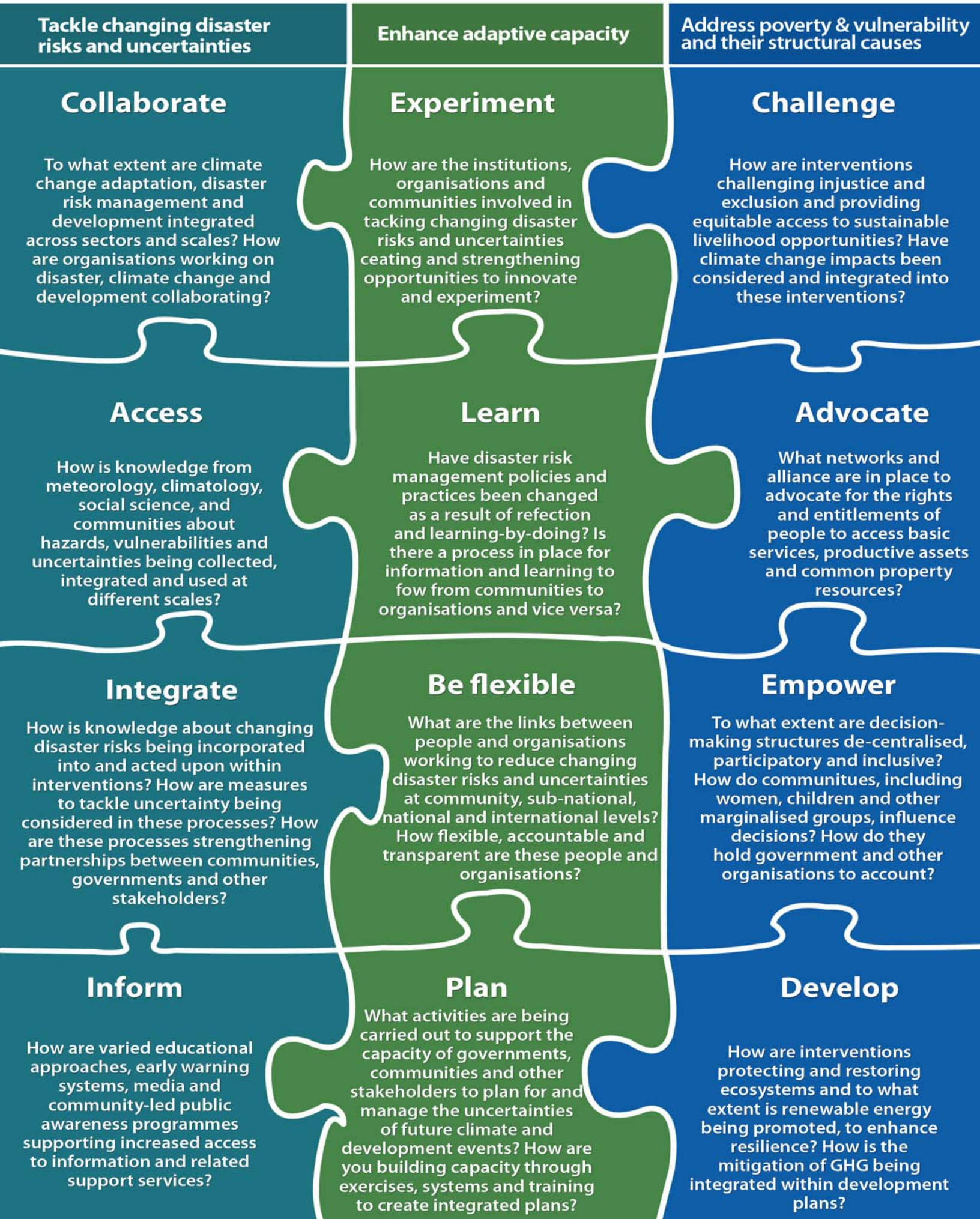
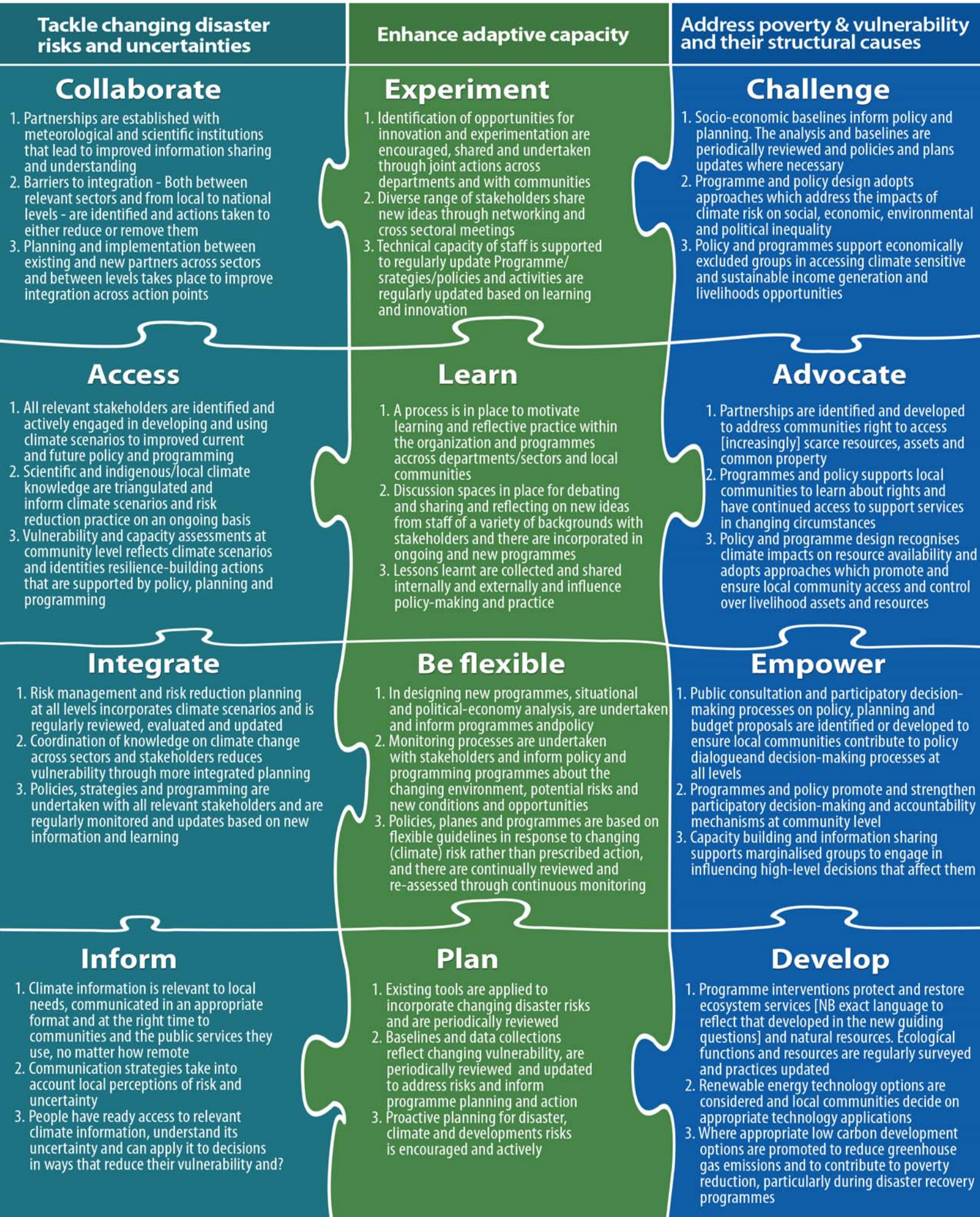


Figure 2: The Climate Smart DRM Approach and its Process Indicators



CSDRM IN SOUTHEAST ASIA

The Climate Smart Disaster Risk Management (CSDRM) Approach Applied in Southeast Asia

The process of conceptualizing, popularizing, validating and sharing the CSDRM approach was developed through the Strengthening Climate Resilience program which took place through a two year period (2010-2011) and involved an iterative process of learning. Implemented by a consortium led by the Institute of Development Studies (IDS), Plan International and Christian Aid, the project developed partnerships with institutions engaged in DRR and CCA in its three target countries in the region – Cambodia, Philippines and Indonesia.

Disaster and Climate Governance

The application of the CSDRM approach in Southeast Asia can be better understood through a more thorough awareness of the state of disaster and climate governance in the three countries involved in the implementation of the SCR program.

Indonesia and the Philippines are both archipelagos gifted with multiple sub-cultures, languages, and geology. The islands' diversity has historically been a source of both unity and conflict. Protection of natural resources is a driver of unity in the archipelago states. Both island states are rich in biodiversity and mineral resources but such richness is actually a result of their very own exposure to the power of the earth's natural forces – movement of tectonic plates, exposure to wind flows, typhoons, regular precipitation and flooding, and tropical heat, among others. Cambodia, on the other hand, is mostly bordered by lands of its neighbouring countries Thailand and Vietnam, feeds on the wealth of the Great Mekong Delta and its land is greatly enriched by the regular flooding in the river system. All three countries have been under the rule of powerful men. Indonesia and the Philippines have both been under authoritarian rulers while Cambodia went through a proletarian rule. Currently, the Philippines is a republic that tries to emulate a democratic system with a strong civil society. Indonesia built its democracy on the foundation of its constitution which ensures civil society participation and its decentralised levels of governance. Although categorized as a constitutional monarchy, Cambodia guarantees citizen participation through its communes and through other platforms initiated by CSOs

that provide a venue for interaction between the government, CSOs, United Nations agencies and donors.

Although climate and other forms of natural and human-induced hazards impact the wider population of these high risk countries, in all three countries the issue of vulnerability and coping capacity in the context of disasters is not always governed with equity and equality. In some instances, there will be room for participation in decision making, while in others, the decision is left to a few. It is in this enabling environment that the application of CSDRM, particularly in reference to its governance structures, must be viewed in Southeast Asia.

Identifying the Needs in the Region

During the first SCR Regional Workshop held in Bangkok in 2010[14], there was consensual recognition of the gaps in DRR and CCA work in the region. There was an articulated realization that traditional coping mechanisms are inadequate for the changing climate and changing natures of disasters. For a Disaster Risk Management approach to be truly Climate-Smart, participants endorsed the need for:

- The integration of climate science in governance and development processes. Climate science should inform policy and development instruments, mechanisms, strategies and practices;
- A recognition that vulnerability, as a development issue, expresses itself in different forms depending on the climate hazards an individual, community, or a country is exposed to;
- Much greater clarity in the interface of climate change and disaster risk management at both governance and the operational level. While there are existing legislations and national strategies for disaster risk management and climate change in the Southeast Asian countries, their implementation processes take parallel paths, and are rarely intersecting;
- Multi-stakeholder platforms for engagement to deal with climate-related disaster risks. No strong government can handle the challenges on their own. No matter how many policies on disaster risk reduction and climate change are made available in a country, the government cannot completely protect all lives and assets from the multiple risks on their own. They need to recognize the key roles that their citizenry, civil society organizations, academic and research institutions, the private sector and other stakeholders each have in ensuring resilience to climate and other hazards.

How Southeast Asia Contributed to the Development of the CSDRM approach

In customising the CSDRM approach to the Southeast Asian context, the SCR programme focused on:

- Making Strengthening Climate Resilience materials available in other languages (i.e. Bahasa for Indonesia and Khmer for Cambodia) and developing SCR materials that ensured better understanding of the approach by different at risk groups – such as children. These interventions ensured that the SCR programme was better able to overcome language as one of the key barriers to integration;
- Facilitating national roundtable discussions on the CSDRM approach bringing together government and non-governmental organisations covering a range of sectors to dialogue and exchange experiences;
- Linking with networks and organizations that pursue DRR and CCA work in the three target counties for the purpose of building platforms of partnerships and learning;
- Development of the CSDRM approach through an iterative process which examined and learnt from evolving work on integration of DRM and CCA in the region;
- Identifying credible DRR and CCA champions in each country who were willing to examine their work using the CSDRM approach and share their learning
- Documenting and sharing various stakeholders; perspectives on CSDRM through video, case studies and exchange platforms to sharpen and deepen the understanding of the various approaches and ways of developing climate resilience in Southeast Asia;
- Evidence gathering and compilation at the country and regional level, identifying case studies of good practice demonstrating CSDRM integration —through an intensive process of documentation and experience sharing with partners in the target countries;
- Presentation of the CSDRM at key international conferences: Asia Ministerial Conference on DRM *(Incheon, Korea, October 2010),* Community-based Adaptation Conference *(Dhaka, Bangladesh, May 2011),* Development Studies Association - EADI Conference on Rethinking Development in an Age of Scarcity and Uncertainty *(York, UK, September 2011)*, and the ISDR 2011 Global Platform *(Geneva, Switzerland, May 2011).*

Throughout the process, a multi-stakeholder approach was employed to facilitate dynamic learning that encouraged and promoted more inclusive knowledge building and collaboration through new partnerships.

Promoting SCR Learning Platforms

The SCR learning platforms that evolved in each country were aligned with existing mechanisms and government policies that define the scope of an institution's work – such as the National Committee on Disaster Management in Indonesia, the Climate Change Commission of the Philippines, and the DRR Forum in Cambodia. The SCR learning platforms at country level also responded to the need to engage civil society organizations and other stakeholders in learning from the experience of the Southeast Asian region in DRR and CCA. Ensuring climate and disaster resilience is now increasingly recognized as a responsibility of the government to its citizens. Particularly in the Philippines and Indonesia, the government's role and efforts in the setting up and advancing of the national SCR learning platforms are strongly acknowledged and encouraged.

Applying CSDRM in Southeast Asia: Learning from the Individual Self-Assessments

Based on feedback of the SCR learning consultations held in each country and at regional level, there was a clear recognition of the need for a climate-smart disaster risk management approach in Southeast Asia. But how such an approach could be used in more practical applications, and particularly what would integration call for in terms of changes in work practices were some of the main challenges identified. In order to address these challenges, the SCR project undertook an action research learning process together with nine SCR partners *(see Table 2)*. Using their organisational experience as a learning opportunity, the SCR partners undertook a process of self-assessment whereby the CSDRM approach was used to analyse current DRR and CCA interventions in regards to vertical and horizontal integration.

Detailed findings of the individual case studies for each SCR programme's Southeast Asia partners are available in Annex 1. The important lessons gained from the partners' self-assessments are outlined in the next section.

Table 2

SCR Project Partners in Target Countries
Cambodia *Lead agency:* Plan Cambodia *Partners:* Centre d'Etude et Développement Agricole Cambodgien/Cambodian Center for Study and Development in Agriculture; Life With Dignity (LWD); Action Aid Cambodia *Platforms:* NCDM, DRR Forum
Indonesia *Lead agency:* Plan Indonesia *Partners:* World Vision, Indonesian Red Cross, BPLHD West Java Environment Management Agency *Platforms:* Indonesian National platform for DRR (Planas PRB), National Council of Climate Change (DNPI), National Agency for Disaster Management (BNPB)
Philippines *Lead Agency:* Plan Philippines and Christian Aid Philippines *Partners:* National Climate Change Commission Philippines, Center for Disaster Preparedness (CDP), National Disaster Risk Reduction and Management Council (NDRRMC), CSO members of the Disaster Risk Reduction Network (DRRNetwork), selected provinces (Albay, Cebu, Camotes) and others. *Platforms:* DRRNetwork
Regional *Regional lead:* Plan International *Other stakeholders:* UNISDR, Mekong River Commission (MRC), IUCN (Mangrove for the Future), ASEAN, UNICEF, Save the Children, CDP, ECHO Networks, UNDP, ADPC, Asian Institute of Technology (AIT) and others. *Platforms:* UNEP Adaptation Platform

IMPORTANT LESSONS

Lessons from the Self-Assessments of Southeast Asia Partners

During an SCR Learning Event in the Philippines

Important lessons were gained from the in-depth self assessments conducted by SCR Southeast Asia partners and exchanges shared at the SCR learning platforms in the three countries. These include:

1 Tackling Current Disaster Risks and Uncertainties But Not Potential Risks Resulting from Climate Change

One of the most glaring lessons from the self-assessments is that, unless mandated (as for example the case of the Climate Change Commission of the Philippines), climate change is not a focus area of many organizations. This finding draws attention to the realization that although climate-related hazards are increasingly challenging communities and countries in Southeast Asia, comunity-level efforts to make people understand the difference between disaster risks and climate change related risks are not enough.

Throughout the consultations and self assessments many SCR partners shared their views that both disaster risk reduction and climate change risk reduction interventions place the focus on extreme climate and weather events. However, climate change challenges us to look beyond current climate hazards, and rather, reflect on the potential effects of the changing temperature, precipitation, wind storms and rise in sea level in the future. While current hazard risks will demand coping and mitigation capacities, climate change hazards will require new skills and innovation for better adaptive capacities and greater commitment to effectively reduce greenhouse gas emissions and contribute to climate change mitigation. Collaborative engagements between the national government, academic and scientific institutions, CSOs, humanitarian organizations, community-based organizations, local government units and even the private sector have been established in many platforms in Southeast Asia. But rarely are these partnerships focusing specifically on climate science and its relation to disasters. Furthermore, rarely are these interventions integrating knowledge of changing risks and uncertainties into planning, policy and programme design to reduce the vulnerability and exposure of people's lives and livelihoods.

2 Strengthening Coping Capacities vs. Strengthening Adaptive Capacities

Climate change is a complex phenomenon. Many countries in Southeast Asia know that they are at risk to climate change. They know that the changing climate will somehow have an impact on their countries. But most do not know exactly how the climate is changing and how that change will affect their nations, populations, livelihoods and other assets. Because many governments, civil society organizations and community based organizations are now becoming increasingly more aware, through the current climate and weather extremes they are experiencing, the innovations developed to date are only capable of responding to current expected hazard scenarios and not to the climate induced hazards of the future. Thus, many of the activities mentioned in Southeast Asia case studies are responses to strengthening coping capacities rather than future adaptive capacities.

3 Addressing Poverty and Vulnerability in a Manner that Contributes to Adaptive and Mitigation Capacities

The need to address issues of economic growth, health, education, inequity, human security, and environmental sustainability, in a manner that increases disaster resilience, is clear and undisputed by many of the Southeast Asian SCR partners. However, the links between poverty and human development with climate resilience remain much less understood by many stakeholders with regards to what needs to be done differently. While many initiatives that support sustainable livelihoods, coastal and environmental management are being implemented, they are currently being implemented under the framework of broad development goals, with rather unclear strategies to address climate-related challenges.

4 Reclaiming the Power to Innovate

Throughout its history, Southeast Asia has been continuously challenged by hazards, both natural and man made. The disasters experienced by the region have caused economic losses that incurred negative impacts on the progress made by countries towards poverty reduction and the Millennium Development Goals. Committed humanitarian organizations, donor and aid agencies are reaching unprecedented levels of fatigue given the recurence of disasters in the region. Modernization has encouraged many stakeholders in the region to embrace advanced technologies for Early Warning Systems and resilient agricultural interventions (e.g. flood resistant seed varieties and other genetically modified organisms) and thus relying less on people's capacity to experiment and innovate. To better plan for uncertainty and unexpected events, investment in innovation and experience at technological level must be balanced with efforts to empower at-risk communities to develop appropriate locally based mechanisms which support resilience – including adaptation and mitigation.

Countries like Cambodia, Indonesia and the Philippines have yet to fully comprehend the challenges likely to arise from climate change. To survive and be resilient there is a realization that an enabling environment for communities to innovate must be in place so that appropriate interventions, actions, and strategies can be developed to tackle climate risks and its widespread consequences.

Despite the increases in DRR and climate change efforts in Southeast Asia, the evidence gathered by the SCR program in the three targeted countries depicts that current DRM interventions are not as climate-smart as originally assumed. However, the following capacities, characteristics and strengths in the region should encourage Southeast Asia partners to pursue CSDRM:

CSDRM Pillar 1
Efforts in Southeast Asia for Tackling Changing Disaster Risks and Uncertainties

Scientists in Southeast Asia have attempted to theorize on the nexus or connection between DRR and CCA, and have conducted research that has established the empirical bases of such a nexus. That nexus should now be taken up to the operational platform and greater collaboration in the work of Disaster Management and Climate Change institutions must be fostered in the region. The cases presented highlight attempts at collaboration with scientific institutions and among sectoral stakeholders. However, there is a need to jointly integrate DRR and climate change initiatives with risk assessment. This could mean integrating risk assessment to development planning, and to work towards improving access to vital risk assessment information. In the Philippines, there are current initiatives to strengthen the science-policy-learning-practice nexus initiated by the Manila Observatory, the Ateneo School of Government and their local government, and community-based partners. Similarly, in Cambodia, its National Climate Change Network has enhanced the collaboration among Network members to ensure the broader reach for climate information[15]. In Indonesia and the Philippines, climate science assessments are being utilized to inform long-term, medium term and annual government plans[16].

CSDRM Pillar 2
Efforts in Southeast Asia for Enhancing Adaptive Capacity

Southeast Asian countries are increasingly contributing to mitigation interventions despite not being major greenhouse gas emitters. The national reports of Indonesia, the Philippines and Cambodia to the United Nations Framework Convention on Climate Change outline their respective mitigation efforts[17]. Nevertheless, the adaptive capacities of these countries requires much greater efforts given the growing salinisation of cultivation lands in Cambodia, recurring drought in Indonesian provinces and the observed escalated frequency and intensity of typhoons striking the Philippines[18]. Innovative efforts to enhance adaptive capacities of those at risk must be informed by projected climate-related risks and the evolving scientific research that is seeking to unravel these future scenarios. The Southeast Asia commitment to experiment and to innovate in information and communication technologies (ICTs) must be matched by the CSDRM community in the region. Innovation and experimentation in climate adaptation requires investment and planning by national governments and actors engaged in DRR and Climate Change. Countries in the Mekong Delta, through the Mekong River Commission, have already developed climate change adaptation strategies to address the changing risk profile in their context[19]; Philippines has developed a Climate Change Adaptation Plan[20]; and Indonesia has prioritized programs for adaptation for its most vulnerable sectors[21]. These national plans have now to be brought down to the community and meso-levels through multi-stakeholder platforms that encourage transformative and co-beneficial enhancement of adaptive capacities.

CSDRM Pillar 3
Address Poverty and Vulnerability and their Underlying Causes

Poverty and vulnerability must be addressed in order to tackle the changing hazards affecting the region. To do so, substantial investments on social capital will be required. The case studies presented highlighted development initiatives in education, livelihoods, health, empowerment, environmental and human security which, albeit important development interventions, fail to adequately make use of climate information, and thus, are exposed to disaster and climate risks. Through the learning process of reviewing the CSDRM approach, SCR partners were able to recognise the many layers that constitute integrated interventions and the complexity of this. Empowering the most vulnerable to become agents of change for climate resilience will require the fostering of stronger partnerships and a change in mindset. Examples of good practices have been documented by the SCR programme, such as the case of San Francisco in Camotes Islands in the Philippines, which is facing an increased risk to climate-related disasters. San Francisco's innovative "purok" system[22] *(a localised governance structure of clustering neighbouring households, and an indigenous method of self-organization at the sub-village level)* has received global recognition as an innovative approach to climate smart governance[23]. The purok system is not unique to the Philippines and has localised versions in many other Southeast Asian communities. The system has succeeded due to strong family ties that translates into settlement patterns and overall community development. The local government unit was able to spot a cultural strength, in this case community social capital, and capitalize on it as a platform for CCA learning, experimentation, innovation, and for encouraging socially just and equitable economic systems.

ADVOCACY

Advocating for a Climate Smart Disaster Risk Management (CSDRM) Approach in Southeast Asia

When the first iteration of the CSDRM approach was completed in October 2010, the SCR team decided to take forward the CSDRM approach and present it at the Asian Ministerial Meeting on Disaster Risk Reduction and Management held in Incheon in South Korea (25-28 October 2010)[24]. In partnership with the Climate Change Commission of the Philippines and the National Council for Climate Change in Indonesia, the CSDRM approach was introduced at the Strengthening Climate Resilience side event entitled: HardTalk dialogue. The representatives of the Climate Change Commission of the Philippines and the National Council on Climate Change in Indonesia, in partnership with the National Disaster Risk Reduction Management Council of the Philippines, who chaired the meeting among ASEAN ministers, actively participated in the deliberations of the ASEAN Committee on Disaster Management (ACDM) and advocated for the endorsement of the CSDRM approach by Asian ministers. The ACDM's Joint Statement for the Asian Ministerial Conference on DRR endorses the climate smart approach to DRM[25]. The highlights of the ACDM Joint Statement on the Occasion of the Fourth Ministerial Conference for Disaster Risk Reduction in Incheon, relevant to the CSDRM advocacy include:

1. The ACDM recognises that a climate-smart approach to disaster risk reduction is urgently needed. Holistically tackling the impacts of climate change and the risk of natural disasters is necessary, if ASEAN Member States are to attain the Millennium Development Goals (MDGs), alleviate poverty, and reduce vulnerability.

2. Recognising the reciprocal relationship between DRR and climate change adaptation (CCA), the component of Prevention and Mitigation of the AADMER Work Programme includes an element that aims to forge programmatic linkages and collaborative mechanisms between DRR and CCA institutions at regional, national and sub-national levels to effectively reduce disaster risks, particularly in climate-sensitive sectors. The AADMER Work Programme also underlines that such linkages between DRR and CCA also need to be firmly embedded in development planning and practice if sustainable development will be achieved.

3. The ACDM sees the need for a discussion with CCA institutions on identifying existing institutional arrangements at the national level that promote linkages between DRR and CCA programmes in ASEAN Member States and determining opportunities to promote active linkages between DRR and CCA institutions and potential areas of cooperation in relevant regional and national activities.

4. The importance that ASEAN Member States put on DRR and CCA and their linkages to sustainable development, are all supportive of the Roadmap for an ASEAN Community from 2009 to 2015.

CONCLUSION

The Evolving Face of CSDRM in Southeast Asia

Southeast Asia is a diverse and dynamic region undergoing different forms of development. It is a region where economic cubs and tigers are emerging; where governments have struggled over the choice between authoritarianism and democracy; where biodiversity and the choices for development play critical roles in the sustainability of ecosystems; where religion and governance patterns still intersect to define a people's development path; where cultural diversity is greater than the region's numbers of islands; and where nature is increasingly defining its people's survival.

The work of SCR partners in Southeast Asia has contributed to the learning that realising climate smart disaster resilience is not a linear pathway of integration. Connectivities have to be built between the different action points that make up the three Pillars of the CSDRM approach.

We need, for example, to **collaborate** to build a reliable climate risk knowledge base, use this to **inform experimentation and innovation** that will ultimately lead to s**ocially just and economically equitable development arrangements** – if we are to truly encourage resilience which is both climate smart and disaster proof. Hence, limiting interventions to integration within one pillar of the approach will not suffice in achieving CSDRM.

Each CSDRM action point has to be woven across the three pillars of the approach – with each turn and each weave in itself building strength and resilience. Like ropes that are woven from the natural fibers of Southeast Asia, or the multicultural DNA of the region, each strand, each twist creates the change that will in itself contribute to realising greater sustainability in Southeast Asia.

ANNEX 1

Case Studies

The case studies that follow present the key points of learning from the self-assessments conducted by the nine SCR partner organizations in Southeast Asia. Information about the organization, programme / project is presented, followed by the highlights of the assessment.

SCR Partner: Cambodia

Centre d'Etude et Développement Agricole Cambodgien / Cambodian Center for Study and Development in Agriculture (CEDAC)

CEDAC is a Cambodian NGO that works with small farmers since 1997 and is currently attempting to build the capacity of small farmers and other stakeholders to adapt to climate change. The focus of this case is on their project aiming to "Promote climate resilient livelihoods of small-scale farmers in the most vulnerable dry land areas in Siem Reap and Kampong Cham provinces" which is being implemented for a five year period (2011-2016). The work is being supported by the European Union and Plan International.

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Overall Project Objective:
Contribute to the eradication of extreme poverty and hunger among small-scale farmer families in dry land areas, enhancing their resilience against climate change, drought and soil degradation.

Specific Objectives:
- *Improved capacity of small scale farmers and local governments to respond to climate change, drought and soil degradation.*
- *Increased and diversified agricultural production through sustainable agriculture innovations in dry land areas.*

Stakeholders:
325 villages in 31 communes of 6 districts: Srei Snam, Angkor Chum, Angkor Thom and Banteay Srei district of Siem Reap Province; Ponheakrek and Dambe district of Kampong Cham Province. 3,250 Direct beneficiaries; 300 commune council members, 590 farmer promoters, 1,475 farmer group leaders and 885 committee members of community based natural resource management groups.

Project Components:
- *Strengthening farmers organizations and networks*
- *Enabling knowledge and commitment in sustainable management and use of natural resource and climate change adaptation and mitigation*
- *Implementation of sustainable agriculture innovations, soil conservation, land management practices, rehabilitating degraded land*
- *Facilitating small farmers' access to markets*
- *Enhancing learning on climate resilient livelihoods among government, NGO networks, communities and other stakeholders*

CSDRM Pillar 1: Tackling Changing Disaster Risks and Uncertainties

COLLABORATE. CEDAC facilitates collaboration through participation in the National Climate Change Network and engaging in the joint Climate Change Initiative on Capacity Development of Cambodian NGOs. Further collaboration with the National Committee for Disaster Management (NDMC) and its vertical structures at provincial and district levels is being sought with support from Plan International.

ASSESS. There are no meteorological, climatic or scientific assessments on hazards and vulnerabilities within CEDAC's target locations. However, CEDAC is working with Commune Councils and Commune Committee for Disaster Management to integrate CCA/M and DRR into Commune Investment Plans (annual development plan of the government at commune level).

INTEGRATE. The project is committed to advocate for the integration of DRR/CCA into the Commune Development Plan (CDP) and Commune Investment Plan (CIP).

INFORM. There is no climatic or meteorological information or early warning system available yet in Cambodia, especially in relation to drought forecasts. CEDAC is committed to learn from existing drought early warning systems which may be useful to small farmers in Cambodia.

CSDRM Pillar 2: Enhancing Adaptive Capacity

EXPERIMENT. The project is supporting field experiment with farmers to deliver climate resilient agricultural techniques and innovations to be adopted by small farmers, local authorities, CBOs (VFOs, Farmer Associations and Natural Resource Groups).

LEARN. A Working Group on Climate Change was developed for the organization to ensure that a knowledge management system is in place and functioning. Learning is also being promoted through annual beneficiary workshops for Farmer Associations, regular meetings of Commune Council and Farmer Associations and provincial NGO network, and farmer exchange visit to learn good practice and successful experiments. Yet, the monitoring and follow-up mechanism for this knowledge sharing is not systematized.

BE FLEXIBLE. The organisation is providing space for reflections on DRR and CCA and its implications to its work within the process of developing strategies and long term programs.

PLAN. At present the organisation is using Vulnerability Assessment and Vulnerability Mapping tools in developing climate-resilient agricultural techniques, however, CEDAC does not yet have any tool specifically used to plan for uncertainties.

CSDRM Pillar 3: Address Poverty and Vulnerability and their Underlying Causes

CHALLENGE. CEDAC's work focuses on the most vulnerable of small-scale farmers. CEDAC also promotes collective saving among farmer groups, introducing community led-business activities and other innovations which are suitable for small scale farmers.

ADVOCATE. The project aims to engage Farmers and Farmer Associations in the preparation of the Commune Development Planning (CDP) and Investment Planning (CIP) processes.

EMPOWER. The project supports the promotion of information sharing in Farmer Associations and Commune Councils on matters like grants to promote transparency.

DEVELOP. CEDAC has established six thematic action research groups to encourage better understanding of climate-resilient livelihoods.

Entry Points to Further Enhance Work on Climate Resilience

CEDAC has indentified the CSDRM's action point **BE FLEXIBLE** as one of the main areas it aims to focus on to enhance the organisation's resilience to climate risks. It aims to gain managerial support towards ensuring greater commitment and engagement of staff to set into motion a learning and reflective process, that encourages discussion spaces to inform programmes and policy-making.

SCR Partner: Cambodia

Action Aid Cambodia (AAC)

ActionAid is an INGO which respects, promotes, protects and works to fulfill the rights of poor and marginalized people in more than 40 countries around the world. The case study focuses on their project – "Reducing Multi Hazard Induced Risks and Vulnerabilities of People of Cambodia" funded by the Disaster Preparedness Program of European Commission's Humanitarian Aid department (DIPECHO). Under its DRR Project, AAC works in target communities through local NGO partners namely Khmer Association for Development of Countryside (KAFDOC) in Kratie Province, Association for the Increase in Development of Family Economy (ADIFE) in Svay Rieng Province, Cambodian Human Resource Development (CHRD) in Banteay Meanchey Province.

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Overall Project Objective:
Increasing resilience of the community by enhancing their capacities and ensuring institutional support systems to manage risks and vulnerabilities caused by natural disasters

Specific Objective:
Enhancing capacities of commune and community institutions and strengthening national and sub-national DRR management systems to address multi-hazards affecting the people of Cambodia.

Stakeholders:
Its target stakeholders are the women heads of households, elderly, poor households, disable people, school children/students, drop out children, orphans, people living with HIV/AIDS, schools, Cambodian Red Cross Youth Volunteers, primary teachers, District Office and Provincial Department of Education, Parents/Parents Teacher Associations, and members of the Councils for Disaster Management at commune, provincial and district levels, Commune and District Council institution, the National Committee for Disaster Management and the Ministry of Planning.

Project Components:
- Enhance the capacity of community institutions and people to develop, revise and implement DRR and contingency plans at the commune level
- Strengthen the national and sub-national DRR management systems, promote networking amongst DRR actors and enhance their capacity to mainstream DRR in the development plan
- Enhance the capacity of teachers, students, district and provincial departments of education, youth and sports in integrating DRR into school-based activities and developing school level DRR Plan
- Develop and promote information and knowledge materials on DRR in Khmer for wider dissemination and coverage and strengthen the cultural groups in all the provinces.

CSDRM Pillar 1: Tackling Changing Disaster Risks and Uncertainties

COLLABORATE. AAC rated itself low as presently its programmes are without any direct focus on climate change. However, AAC's DRR strategy addresses disaster vulnerability through community resilience activities, institutional linkages, and increased capacity of institutional mechanisms. The organisation is planning to increase the integration of climate change in its DRM and development work.

ASSESS. AAC's program does not presently integrate climate change assessments. Disaster risk information is gathered at and by target communities and stakeholders through Participatory Vulnerability Analysis (PVA). No connection at present is made between AAC and community stakeholders to climate science institutions.

INTEGRATE. AAC, through its local partners actively assist targeted Village Taskforces to participate in the commune planning process in order to advocate for the integration of disaster risk reduction activities/ initiatives into the commune investment programme.

INFORM. Disaster risk information is made available in the assessment of potential risks and for planning purpose at community level. Furthermore, AAC assists in organizing the Provincial DRR Forums – a platform to share and learn about community based disaster risk reduction and climate change. This is also the official platform to validate, update and approve the Provincial Disaster Risk Management Action Plans. AAC is also supporting the national efforts to integrate climate change and disaster management into the educational curricula.

CSDRM Pillar 2: Enhancing Adaptive Capacity

EXPERIMENT. At commune level, results from Participatory Vulnerability Assessment are consolidated to identify and prioritize the risks, needs and plans at commune level. AAC provided small scale disaster mitigation/risk reduction grants to each target village, in order for communities to have the resources to pursue new actions towards resilience.

LEARN. AAC utilizes internal and external platforms and networks to share lessons learnt and best practices. An Annual Partnership Workshop provides all AAC and all its partner organizations the opportunity to share learning and discuss project implementation and management feedbacks.

BE FLEXIBLE. AAC's active learning approach is known as IASL (Impact, Assessment, Sharing and Learning). The tool enables AAC's program team to critically assess its project achievements and draw lessons learnt from the implementing approaches.

PLAN. AAC, through its NGO partners, supports its target communities to utilize Participatory Vulnerability Analysis (PVA) to inform planning on how best to maximize local capacity to reduce disasters risks.

CSDRM Pillar 3: Address Poverty and Vulnerability and their Underlying Causes

CHALLENGE. AAC , through its other projects, is supporting community groups such as Self Help Groups, rice bank groups, cow bank groups, women's group and Village Development Committees, in order for them to be able to challenge socio-economic, political and environmental inequality.

ADVOCATE. Community based organizations (under the core programmes of AAC), are empowered to manage their own development and ensure local government authorities (i.e. commune councils) address their needs in commune development plans.

EMPOWER. Women and marginalized groups are supported to participate in village development processes. Children's participation is being supported through school DRR plans, and is now being endorsed into commune investment programmes.

DEVELOP. AAC at present does not focus on environmental assessments and low carbon development as its primary focus has been on disaster risks affecting communities. CCA and mitigation are not yet being addressed.

Entry Points to Further Enhance Work on Climate Resilience

The main entry point towards a climate-smart disaster risk management approach in AAC is **LEARN** and the organisation is seeking to enhance the understanding of its staff and partners on adaptive capacity through the greater integration of climate change risks in the organization's processes.

SCR Partner: Cambodia

Life With Dignity (LWD)
Building Disaster Resilient Communities in Cambodia Project

Life With Dignity (LWD) is a Cambodian NGO made autonomous from the Lutheran World Federation (LWF) Cambodia in Jan 2011. Building Disaster Resilient Communities in Cambodia is a project supported by DanChurchAid/Christian Aid, and the Disaster Preparedness Program of the European Commission's Humanitarian department (DIPECHO) and was implemented from June 2010 to September 2011.

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Overall Objective:
To reduce the vulnerability and increase the coping capacities of Cambodian populations living in areas most affected by recurrent natural disasters.

Specific Objectives:
To Increase resilience and reduce vulnerability in local communities in 2 provinces through support to strategies that strengthen institutions and enable local communities to better prepare for, mitigate and respond to natural disasters.

Stakeholders:
137 villages in 15 communes in 5 districts of 3 provinces: Kampong Speu, Kampong Chnang and Battambang. Poorest households, women headed households, elderly, disabled people, farmer field school, Village Development Committee (VDC), Village Disaster Management Group (VDMG), Commune Committee for Disaster Management (CCDM), District Committee for Disaster Management (DCDM), Provincial Committee for Disaster Management (PCDM), Provincial Department of Education, Youth and Sports (PDEYS), Provincial Department of Agriculture (PDA), students, teachers and other provincial departments.

Project Components
- Establishing and strengthening Disaster Management structures at sub-national and local levels
- Demonstrating local mitigation and adaptation measures
- Strengthening structures and coordination at all levels for knowledge-management, sharing and advocacy

CSDRM Pillar 1: Tackling Changing Disaster Risks and Uncertainties

COLLABORATE. At commune level, LWD in cooperation with the National Committee for Disaster Management (NCDM) facilitates the activation and capacity building of the Committee for Disaster Management at Commune and Provincial levels. The integration of DRM actors in the development of Provincial Disaster Risk Reduction Action Plans is promoted. Enhancing climate change adaptation capacity among responsible government departments and offices is generally considered within the provincial action plan.

ASSESS. LWD has promoted the use of Participatory Rural Appraisal (PRA) and Hazard Vulnerability and Capacity Assessment (HVCA) tools to assess the disaster risks and community capacity as well as for village DRR action planning. Limited assessment tools or climate science for climate risks are available.

INFORM. LWD is presently not engaged with climate information systems or early warning systems. However, it has been supporting public awareness on disaster preparedness and climate change impacts at community level.

Entry Points to Further Enhance Work on Climate Resilience

COLLABORATE. LWD is aiming to prioritise greater cooperation with government agencies, NGOs networks, academic institutes, media and communities on climate resilience.

CSDRM Pillar 2: Enhancing Adaptive Capacity

EXPERIMENT. LWD is implementing a pilot project on Drought Resilient Agriculture Techniques (DRAT) as an intervention for learning appropriate measures for climate resilient and sustainable agriculture. These sustainable and resilient techniques are based on community knowledge that have been certified by CEDAC and Department of Agriculture.

LEARN. LWD has set up an internal Working Group on Environmental Disaster and Climate Change. Its main responsibilities are to develop, review and update program guidelines on environment, disaster management and climate change.

BE FLEXIBLE. LWD is limited to the implementation of project actions as per donor agreed funding for this particular programme . However, it sees room for flexibility at village level where hazard, vulnerability and capacity assessments are led by villagers, and flexibility can take place in planning for disaster risk reduction measures to reduce vulnerability at village level.

PLAN. LWD uses HVCA (hazard, vulnerability and capacity assessment) as a tool to promote the integration of disaster risks in village development plans.

CSDRM Pillar 3: Address Poverty and Vulnerability and their Underlying Causes

CHALLENGE. LWD has a comprehensive "Village Graduation Guideline" which evaluates the development of its target villages by assessing changes to the capacity of CBOs, change to the awareness and understanding of villagers, and changes to the improvement of social and economic standard of the community members particularly the poorest households.

ADVOCATE. LWD has been working in partnership with commune councils; the Council for Disaster management (at commune, district and provincial levels); Provincial Department of Rural Development, Women Affairs, Education Youth and Sports and Agriculture, among others for greater integration of those government bodies to address disaster risks.

EMPOWER. LWD contributes to the District Integration initiatives – an official mechanism as part of the commune development planning process in which all the approved commune investment programs of the coming year are shown to government departments, NGOs and private sector and commune members.

DEVELOP. LWD has contributed to the establishment of the Community Based Natural Resource Management Committees (CBNRMC) to raise awareness and capacities among community members of the environment and sustainable and equitable use of natural resources. Further work needs to be done to incorporate mitigation of GHG emissions.

SCR Partner: Indonesia

Plan Indonesia
School Based Disaster Risk Reduction Programme

Plan's programme strategy in Indonesia is dedicated to helping marginalised Indonesian children reach their full potential – particularly through improving access to quality education and safe learning environments. Furthermore, children's participation in decisions related to their own development is limited, and children in the most difficult circumstances are disproportionally exposed to disaster risks.

Following the 2006 tsunami in Aceh and the earthquake in Yogyakarta Plan developed its child centred approach to DRR, which empowers children to work with communities, non-governmental organization partners and local governments in building local resilience to disaster risks. Interventions to integrate disaster resilience in the education sector include promotion of retrofitting in school reconstruction, strengthening the capacity of school management on DRR, increasing community participation in school governance and school based DRR committees. In 2009, Plan's core education approach (called the School Improvement Program - SIP) committed to increase the resilience of schools and the wider community through a school-based DRR approach.

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Overall Objective:
The School Based Disaster Risk Reduction (SBDRR) programme aims to contribute to Plan's overall objective of "creating safe and resilient communities where children and youth can develop a culture of safety and take an active role by participation in Disaster Risk Reduction". Child centered disaster risk reduction seeks to nurture children's knowledge in expressing and articulating their full potential without differentiation of age, gender, religion, ethnicity or education.

Stakeholders:
The school based DRR program (SBDRR) is targeting the following stakeholders in its DRR capacity building work — from duty bearers (Education Office, Development Planning Agency, school teachers, principals, and parents), intermediaries (local NGOs and DRR Forum members), and the school children as the right holders. The expected outcomes are to foster actions where children and their communities build a culture of safety and resilience, and are actively participating in reducing the risks of disaster.

The SBDRR Project was implemented in Yogyakarta (2 subdistrict in Bantul Regency) in collaboration with Lingkar and KYPA and West Sumatra (2 subdistrict in Pariaman Regency) in collaboration with KOGAMI and KYPA. Yogyakarta experienced an earthquake in 2006 and caused infrastructure damage including schools in Dlingo, Piyungan dan Pleret, Bantul District which hindered learning in 10 schools. West Sumatra was also struck by a 7,5 RS earthquake in 2009 which also caused infrastructure damage to schools and traumatized children and their parents. Some children were not allowed to go to school because of trauma and also because of lack of knowledge in disaster preparedness.

The SBDRR in Bantul, Yogyakarta also aimed to integrate climate change with disaster risk reduction action. It aimed to raise awareness on disaster impacts and causes, including climate change to students in Yogyakarta using the Child-Centered Disaster Risk Reduction approach. Plan made use of HVCR tools and diverse education materials for children such as movie and educational games.

CSDRM Pillar 1: Tackling Changing Disaster Risks and Uncertainties

INTEGRATE. In the SBDRR project, climate change is seen as part of the disaster risk reduction work. The integration between climate change and disaster risk reduction is still in the early stages. However, integrated messaging to increase knowledge on changing risk and uncertainties has been applied in the school curriculum. The project also aims to increase knowledge and practice in child centered disaster risk reduction efforts that are suited to the local context. This is also an effort to mainstream disaster risk reduction in to schools as promoted in Circular Letter of Education Minister no.70.

CSDRM Pillar 2: Enhancing Adaptive Capacity

EXPERIMENT. Strengthening the capacity of school communities on SBDRR includes developing effective structures and mechanisms in the school to identify risk, and learn more about mitigation and disaster preparedness. The children's capability and active participation in disaster risk reduction will also be developed through group "mini project" activities. Children are facilitated through mini projects to develop activities such as seed banking or other structural/non structural mitigation actions. Capacity building and mechanism development are aimed at building awareness of disasters at the school level. To achieve this aim there were trainings conducted on conceptual framework on SBDRR, emergency planning, safe areas and evacuation maps, and evacuation simulation procedures in school. Experimentation and innovative techniques/strategies that reflect local indigenous knowledge for adaptation in the local communities are being promoted. Some of the activities related to this include student Wayang performance at Payak Elementary School during the launching of the "1 Million Safe Schools and Hospitals in Yogyakarta" campaign.

PLAN. To support the activities in the SBDRR project, several tools are being used, such as:

- Knowledge, Attitude, Practice (KAP) survey to measure or assess children on their knowledge, attitude, and practice related to DRR and CCA. In this project 174 children from 6 elementary schools took part in this process.
- Hazard, Vulnerability, Capacity and Risk (HVCR) assessment for children and teachers aims to enhance students' knowledge of hazard, vulnerability and capacity in the school environment. HVCR assessments contributed to awareness raising in schools on DRR and CCA concepts, contingency planning, standard and simulations. Children assessed the conditions in their school environment related to hazard, vulnerability, capacity, and risk. The results of the assessment are compared with the results of the assessment done by adults. HVCR results have also shown that children can identify unique hazards, vulnerabilities, capacities and risks. Each school has different hazards although located in one close area. The results were taken as a baseline to set a safe learning environment and findings were communicated to the school and wider community for planning and policy making.
- Mid-term monitoring and evaluation
- Participatory monitoring and evaluation.

The activities mentioned above are related to the indicators "Baselines and data collection reflect changing climate conditions, and are periodically reviewed for programme planning and action." Although the baseline and data collection cannot appropriately reflect the climate conditions, this can be a starting point for the community and Plan to develop further actions. The activities above are also in line with the indicator "Existing tools are modified to incorporate changing disaster risks and are periodically reviewed". Existing tools that have been modified include the HVCR which was customized for the children and was used in the SBDRR programme. Furthermore, Plan Indonesia also developed a disaster risk assessment module promotes guidelines for facilitators to help regular and continuous effort in reviewing the hazard, vulnerability, and risk, as well as ensuring children's rights and participation in the programme

Learning Points from the Self-Assessment

The use of the Climate Smart Disaster Risk Management approach drew out important insights from the SBDRR analysis:

- SBDRR mainly focused on disaster issues and the school community. The integration of disaster risk management with climate change is an area of learning that is yet to be developed.
- Climate change needs to be better understood by school systems and other stakeholders in order for them to promote CCA integration.
- The integration of climate change and disaster risk reduction through the CSDRM approach needs to be more context-specific with perspectives on how the approach can be translated into practical action at the community level.

SCR Partner: Indonesia

World Vision Indonesia
Strengthening Livelihoods and Reducing Local Vulnerabilities (Solve Project)

World Vision is a Christian humanitarian organization working to create lasting change in the lives of children, families and communities living in poverty. World Vision is dedicated to work with the world's most vulnerable people and serves all people regardless of religion, race, ethnicity or gender.

World Vision's relief, development and advocacy work is based on a vision of a world committed to the well-being of children. World Vision strives to build thriving communities where peace and justice will prevail and all can enjoy security, opportunity and contentment. It requires active participation and ownership of community members, in all aspects of their development, and reciprocal relationships, mutual accountability, shared decision-making, values and the development of capacity, critical awareness and community-based organizations - CBOs).

World Vision Indonesia together with Wahana Visi Indonesia implements a country strategy programme focused on: Transformational Development, Sponsorship, Health, Education, Water and Sanitation, HIV and AIDS response, Promotion of Justice, and Economic Development. The other fields of work that World Vision Indonesia does related to disasters are:

- Emergency Assistance;
- Pre-positioning;
- Response;
- Rehabilitation; and
- Disaster Mitigation.

Overall Objectives and Stakeholders:
The Strengthening Livelihoods & Reducing Local Vulnerabilities (SOLVE) project is implemented in Sambas District. SOLVE aims to reduce community vulnerabilities through improved livelihoods and sustainable environment. The project will support the community and other stakeholders to have better ways of understanding and managing their environment, not only in order to reduce their vulnerability to natural disaster, climate change and other threats, but also to improve their quality of life through environment based livelihood activities (such as forrest management). Working at the community level, the project will strengthen links with government and civil society and community groups and foster participation in decisions regarding changes in land use and ecosystems protection. The end result of this project will benefit especially children and women through more secure livelihoods and greater opportunity for participation.

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CSDRM Pillar 1: Tackling Changing Disaster Risks and Uncertainties

INTEGRATE. Disasters that that have been identified in Sambas are drought, flood, changing on plating season. SOLVE focuses on environmental change, livelihood, and building resilience. To address these issues, the SOLVE initiative works with the Education Agency, Health Agency, Social Agency and Local Planning Agency at district level. For the SOLVE project, the partnerships needed to be widened to include the Local Environment Agency, Forestry and Plantation Agency, Agriculture Agency. This initiative proved to be quite challenging at first but crucial in terms of bringing together key actors engaged in resilience building at meso and local levels.

CSDRM Pillar 3: Address Poverty and Vulnerability and their Underlying Causes

DEVELOP. SOLVE supports a waste management program for women in Teluk Kramat and Sajingan Besar Sub District. The Programme also aims to create alternative livelihoods for the people and at the same time is trying to solve the increasing amount of waste. As a result, plastic and other recyclable waste are now being separated at these sub districts, and reused/recycled – supporting better environmental sustainability and contributing to reductions in GHGs.

EMPOWER. The SOLVE project made use of participatory processes engaging wormen and other vulnerable groups to improve their income and improve their confience to participate in local decision making forums for DRR action planning. This also included promoting multi-stakeholder engagement through research and analysis processes.

The community of Lela village in Sambas has eagerly adopted community mapping as a tool for increasing community resilience.

Learning Points from the Self-Assessment

The use of the Climate Smart Disaster Reduction Management approach drew out important lessons from the SOLVE project:

- The SOLVE project identified entry points using the climate smart approach that were more focused on improving sustainable environment and livelihoods for reducing vulnerabilities.
- Further engagement, integration, and collaboration with various ither identified partners are needed to achieve the project goals.
- Entry points for climate smart approaches can be diverse. Mitigation approaches such as Reducing Emissions from Deforestation and Forest Degradation (REDD), and land use issues should also be covered by the CSDRM approach.

Throughout the documentation process with World Vision Indonesia, more lessons surfaced:

- Indigenous knowledge, local wisdom, and informal approaches are needed to enrich the CSDRM approach
- Social and cultural aspect are also factors to be considered on developing an approach
- Climate change issues in Indonesia have diverse entry point such as livelihood, disaster, or sustainable development aspects
- Context-specific application of the CSDRM is encouraged if uptake of the approach is to be pursued. For instance, flooding in West Kalimantan will necessitate new and innovative ways to transport goods through the river.

SCR Partner: Indonesia

Mid Term Development Planning for West Java Province, Indonesia: Mainstreaming Climate Change

The Regional Environmental Management Agency (BPLHD) of West Java province is tasked to formulate policies and provide technical support in the field of Environmental Management according to local needs and other delegated authority. In order to support the vision of West Java of "achieving self reliant, dynamic and prosperous communities", the Regional Environmental Management Agency (BPLHD) of West Java province set its mission as "to become an agent of change to promote attitudes and environment friendly behaviour in order to achieve sustainable development by 2013".

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Overall Objectives:
BPLHD West Java's strategic plan for 2008-2012 included the following objectives:

- Improving environmental quality (water, air, and land).
- Maintaining harmony and balance utilization of natural resources for people's welfare.
- Environmental management based on science and technology.
- Improving the performance of environmental management for enterprises and industry sector.
- Build awareness and community participation.
- Building a green society.
- Improving the effectiveness of application of environmental regulation.
- Developingan environment clearing house.

Intervention Components
BPLHD West Java also aimed to integrate the hazard profile of the province and its disaster experience in its strategy plan through the following interventions:

- Baseline data compilation of disaster prone areas in Southern area of West Java.
- Disaster risk vulnerability map for Southern area of West Java.
- Evacuation routes in Pelabuhan Ratu.
- Study on insurance for disaster risk in Southern area of West Java.

BPLHD West Java is aiming to implement its strategy together with a parallel study to develop a model for climate change mitigation and adaptation. The study took place in the North Coast of West Java (including Cirebon, Indramayu, Subang, Karawang, and Bekasi). Furthermore, the development of climate science scenarion projections is to be explored.

CSDRM Pillar 1: Tackling Changing Disaster Risks and Uncertainties

COLLABORATE. BPLHD collaborates with 11 other institutions, namely the local planning and development agency, plantation agency, housing agency, industrial and trade agency, water resource management agency, forestry agency, agriculture agency, energy and mineral resources agency, transportation agency, health agency, and local disaster management agency. The agencies collaborate on climate change mitigation and adaptation through a coordination team. This coordination team aims to develop synergy in addressing the issue of climate change and programme engagement across and among all sectors. The coordination team is also responsible for identifying and evaluating climate change impacts on development in the District/Regency of West Java, as well as coordinate mitigation and adaptation action with related government institutions, and advocate for actions to contribute towards reductions in Green House Gas (GHG) emission.

INFORM. Further work on raising the awareness and knowledge on climate change and climate related disaster has yet to be fully developed and needs to be given much greater attention by BPLHD West Java in order to increase access of all stakeholders to information and support services concerning changing disaster risks, uncertainties and broader climate impacts.

CSDRM Pillar 2: Enhancing Adaptive Capacity

EXPERIMENT. Due to the growing impact of the changing climate, fishermen in Cirebon are now breeding 'nila' fish and have planted local trees around the embankment as part of a community-based initiative resulting from project interventions. However, collaboration with universities, academe, or related institution must be more effective and more strongly encouraged in order to determine the appropriateness of the innovations in regards to effective climate adaptation.

Learning Points from the Self-Assessment

The use of the Climate Smart Disaster Reduction Management approach drew out important lessons from BPLHD's experience in West Java:

- Context-specific application of CSDRM in each sector will help users better understand the application of the approach itself and overlaps and areas for better collaboration.
- Scope and limitations provided by laws, regulations, and mandate of each institution may hinder the integration across the pillars as suggested in the CSDRM approach. Each agency has a mandate in specified levels of governance. Laws will often limit their operation at certain levels and in certain tasks. Because of this, partnerships and engagement with other agencies or with other stakeholders across the 3 pillars as suggested by the CSDRM approach may be a challenge, but one which needs to be addressed for horizontal and vertical integration to take place.

SCR Partner: Indonesia

Indonesian Red Cross Societies (PMI)

The Indonesian Red Cross (PMI)'s main role is to assist governments , humanitarian actors and beneficiaries to cope and respond to disasters, Increasingly PMI is integrating CCA in its work. The mandate of the Indonesian Red Cross includes:

- Preparedness and disaster relief
- First-aid training for volunteer
- Health care and welfare for community
- Blood transfusion service (in accordance with Government Regulation No. 18 year 1980)

With the support of the International Federation of the Red Cross and Red Crescent (IFRC), Netherlands Red Cross and German Red Cross, PMI is seeking to integrate climate change adaptation in its program Risiko Terpadu Berbasis Masyarakat (PERTAMA-Integrated Risk Community Based Programme). The project is being implemented in four Sub Districts in West Jakarta and East Jakarta since 2005.

Overall Objectives:

- To improve community capacity to confront disaster risks as well as
- To reduce the community's vulnerability to the negative impact of climate change

Project Components:

PMI facilitated a National Workshop to review and inform its DRM and CCA strategy, attended by board members, staff and volunteers from ten chapters of PMI, the Consortium for Disaster Education, UN representatives, among others. The strategy identified focused on reducing risks and impacts of disaster through climate change adaptation by:

- Implementing climate change adaptation advocacy, awareness and orientation.
- Developing a strategy, approach and tools for climate change adaptation - integrating climate change adaptation in disaster management and community based programs.
- Promoting climate change adaptation through disaster preparedness and health behaviour.
- Integrating Climate Change Adaptation in Integrated Community Based Risk Reduction (ICBRR) Programme through the following:
    - *Development of a pilot project in an urban area at risk to climate change*
    - *Integration of CCA and DRR in the multi-program platform of PMI*
    - *Integration of climate change and disaster risk management in the Community-Based Action Teams (CBAT)*
    - *Capacity building for internal PMI and its partner organizations.*

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PMI's Kelompok "Hijau Dan Bersih" (Green & Clean) project

CSDRM Pillar 1: Tackling Changing Disaster Risks and Uncertainties

COLLABORATE. Activities are designed to strengthen the collaboration between PMI, community and local governments. At the national scale, PMI engages with the National Climate Change Council, Ministry of Health, National Agency for Disaster Management, and also the meteorological, climatology, and geophysical agency (BMKG). PMI develop a Memorandum of Understanding with BMKG to enhance the information flow and knowledge.

INTEGRATE. Integrated Community Based Risk Reduction has been implemented under the PMI programme since 2003. For ICBRR-CCA programme, data and information in previous interventions inform current and future work. Analysis of climate change vulnerability and exposure assessments is applied to livelihoods interventions under the ICBRR-CCA .

CSDRM Pillar 2: Enhancing Adaptive Capacity

EXPERIMENT. Climate change and microfinance are new initiatives being explored by PMI. Experimentation and the development of innovative techniques and strategies involve local communities and reflect local indigenous knowledge. Moreover, in PMI, development of communication tools and education through the media are encouraged. *Lenong* (traditional opera), songs, radio broadcasts are used by local volunteers as a tool to convey disaster and climate issues.

Furthermore, sharing of new ideas through networking and cross sectoral meetings are also encouraged. The community leader, the head of "Rukun Tetangga", the head of "Rukun Warga", Health Volunteers and other stakeholders from the communities and civil society organizations are invited and encouraged to share their opinions on issues regarding DRR and CCA. Programme/strategies/ policies, activities and innovation are regularly reviewed and modified based on learning and innovation (CSDRM indicator 3 under Action Point EXPERIMENT) and is also part of the ICBRR-CCA work of PMI.

PLAN. The ICBRR-CCA used the Vulnerability and Capacity Assessment (VCA). PMI trained CBAT on the VCA tools and equipped them with climate change knowledge. CBAT members conduct mapping of the potential hazards, vulnerabilities, risk, and capacity that feeds into programme planning. Vulnerability and risk analysis are periodically reviewed based on climate information and baselines are also periodically reviewed.

CSDRM Pillar 3: Address Poverty and Vulnerability and their Underlying Causes

CHALLENGE. Socio-economic baselines are in place to inform policy and planning and are evaluated before, during and after programme implementation. Data collection is aimed to select appropriate beneficiaries and also suitable microfinance activities to address risks of negative impacts on social, economic, environmental and political context. In ICBRR-CCA's case, microfinance activities were also able to support environment protection and disaster risk reduction activities. The findings of the VCA and socioeconomic survey indicated that floods will cause loss of income or further economic loss. To reduce the negative impacts of disaster, microfinance schemes would need to be established to leverage community resilience towards loss from disaster. Furthermore, the activities were broadened to provide legal financial access to leverage economic conditions.

Learning Points from the Self-Assessment

- Internalization and mainstreaming issues such as climate change needs time to be embodied comprehensively.
- Communicating CSDRM to various stakeholders may have to be more targeted to ensure that the modes and media of communication are appropriate for the specific stakeholders.
- Local knowledge or culture can be tools to spread the CSDRM approach.
- Livelihoods and the economy can be an entry point for integration of disaster risk reduction and climate change adaptation.

SCR Partner: Philippines

Climate Change Commissionm (CCC), Philippines

The Climate Change Commission (CCC) is a national government agency attached to the Office of the President responsible for coordinating, monitoring and evaluating the programs and action plans of the Philippine Government relating to climate change. It was created in pursuant to the provision of the Republic Act No. 9729 or the Climate Change Act of 2009. As a policy-making body, the commission is primarily tasked to mainstream climate change, in synergy with disaster risk reduction, into government policy formulations, formulate the National Framework Strategy on Climate Change (NFSCC) and craft the National Climate Change Action Plan (NCCAP). The NFSCC and NCCAP are policy documents that will guide the local government units (LGUs) in crafting their climate change action plans.

It is headed by the President and three commissioners who each have a fixed term of 6 years in office. A total of 23 government agencies, local government units and representatives from the academe, business sector, and non-government organizations (NGOs) comprise the body's advisory board. At present, around 46 personnel are working for the commission who are under the Climate Change Office, the CCC's Secretariat.

Climate Change Commission
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Malacañang Compound
San Miguel, Manila 1000, Philippines
Website: climate.gov.ph

The Philippine Government advanced the formation of the CCC as part of its commitment to international agreements namely the United Nations Framework Convention on Climate Change (UNFCCC) and the Hyogo Framework for Action (HFA) which both aim to put forward safety and resilience to climate change-related hazards and disaster risks.

Overall Objectives:
The commission envisions a climate risk-resilient Philippines with healthy, safe, prosperous and self-resilient communities, and thriving and productive ecosystems. It aims to build the adaptive capacity of communities and increase the resilience of natural ecosystems to climate change and optimize mitigation opportunities towards sustainable development. Its programs and services are tailor fitted primarily for communities that are impoverished and are identified to be highly vulnerable to climate-related risks and hazards.

In addition to the above mentioned, according to section 9 of RA 9729, the CCC's functions also include the following: a) recommend key development investments; (b) create an enabling environment for appropriate risk-sharing and risk-transfer instruments; (c) create an enabling environment for multi-stakeholder participation; (d) formulate GHG mitigation strategies; (e) represent the country in Climate Change negotiations; (f) coordinate with local government units and private entities; (g) facilitate capacity building; (h) promote and provide technical and financial support to local research and development programs, and (i) oversee climate change information dissemination.

Intervention Components:
The commission has seven strategic priorities as reflected in the NCAAP and these include: food security; water sufficiency; ecosystem and environmental stability; human security; climate-smart industries and services; sustainable energy, and knowledge and capacity development.

CSDRM Pillar 2: Enhancing Adaptive Capacity

The CCC is strongest in the second CSDRM pillar–Enhancing Adaptive Capacity. This is supported by the high mark that its staff gave to the Pillar 2 components during the self assessment process. They identified these CSDRM action points to be strongly evident in their current work which demonstrates their commitment to the fulfillment of RA 9729 provisions. The identified CSDRM entry component along with its indicators are as follows:

EXPERIMENT. Strengthen the ability of people, organization and networks to experiment and innovate.

New ideas and experimentation are encouraged, shared and undertaken through joint actions across department

The commission acts as the Secretariat of the Cabinet Cluster on Climate Change Adaptation and Mitigation. It is one of the cabinet clusters created through the issuance of Executive Order creating a mechanism directing all initiatives and efforts in fulfilling its social contract with the people. This provides an avenue to continuously facilitate engagement with other departments that sit in other clusters like Good Governance and Anti Corruption; Human Development and Poverty Reduction; Economic Development; and Security, Justice and Peace and pave the way for innovative approaches to dealing with climate and disaster-related issues, among others.

Experimentation and innovative techniques/strategies involve local communities and reflect local indigenous knowledge

The CCC makes it a point that local communities are actively involved in the piloting of the NCCAP. Other than representatives from the Local Government Unit, the commission engages the community people, starting from the orientation activity down to the planning stage.

Diverse working range of stakeholders share new ideas through networking and cross sectoral meetings.

At the global level, the Commission has an avenue to converse and interact with DRR and CCA practitioners through various conferences and forums organized by UN agencies, IPCC and other international bodies. At the national level, it constantly links with the CSOs through the Aksyon Klima Pilipinas and Social Watch Philippines. The former is a network of civil society organizations in the country that work together to discuss and deal more effectively with the issue of climate crisis and its adverse impacts. Taking into account the committed efforts of Aksyon Klima which is a network of civil society organizations doing advocacy work, it is considered as a credible source of information, expertise, and skills on climate change issues. It also works closely with the Manila Observatory, a private research institution, to get relevant science-based information (i.e. climate forecasts, scenarios, projections).

Entry Points to Further Enhance Work on Climate Resilience

As agreed upon by the CCC, the following are the Commission's entry points to CSDRM:

EXPERIMENT: strengthening the ability of people, organization and networks to experiment and innovate;

BE FLEXIBLE: promotion of regular learning and reflection to improve the implementation of policies and practices; and

PLAN: integration of knowledge of changing risks and uncertainties into planning, policy and program design to reduce the vulnerability and exposure of people's lives and livelihoods.

Learning Points from the Self-Assessment

The participants of the case study raised the following concerns on the CSDRM approach as applied to the CCC:

- Some of the indicators are not applicable in the context of the Commission.
- Some of the terms used are difficult to understand. They suggested to make the words simpler for easy comprehension of all stakeholders.
- The participants agreed that the commission is strongest in CSDRM Pillar 2: Enhance Adaptive Capacity.

SCR Partner: Philippines

Marikina Watershed Environs Integrated Resource Development Alliance (Alliance of Seven / A7), Philippines

Six local government units (LGUs) that were severely affected by Typhoon Ketsana in 2009- Marikina, Pasig, Antipolo cities, and the municipalities of Rodriquez, Cainta and San Mateo in Rizal province- joined together with Resilience to work together for improved coordination, pool and share knowledge and resources in the quickest possible time in order to provide a more integrated or holistic strategy to disaster response. This included vulnerability assessments, the creation of 'early warning systems', and resettlement and rehabilitation of communities affected by the natural disasters. This was the start of the Marikina Watershed Environs Integrated Resource Development Alliance, now informally known as the 'Alliance of 7'. A seventh local government unit, Quezon City, joined the alliance in 2011.

Marikina City Hall
Sta. Elena, Marikina City
Metro Manila, Philippines
Website: www.marikina.gov.ph

Objectives and Interventions:
The Alliance of Seven (A7) and Resilience: Nurturing Disaster Ready Cities and Communities, together with relevant government agencies and other citizens groups undertook a series of "Planning Workshops for Disaster Risk Reduction"[26]. These were venues to share ideas and expertise, and to harness initiatives for disaster and climate risk-sensitive development. The A7-Resilience Plan for 2011-2013 corresponds, both to local and international disaster risk reduction agreements such as the Hyogo Framework for Action, the United Nations Framework Convention on Climate Change, the Delhi Declaration on Disaster Risk Reduction of 2007, the Climate Change Act of 2009, and the Disaster Risk Reduction and Management Act of 2010.

The planning workshops were divided into 3 stages. The first workshop focused on identifying and developing the fundamental elements of the 2011 Disaster Risk Reduction Plan based on the following areas:

- Disaster Vulnerabilities, Capacities and Needs Assessment;
- Early warning systems installation command integration and contingency planning;
- Rehabilitation and Reforestation of the Marikina Watershed - including the review of existing policies;
- Resettlement plan for highly at risk communities – including the possibilities for in-city relocation and livelihood assistance; and,
- Project development and resource mobilization initiatives for the implementation of disaster risk reduction plans and initiatives.

Existing policies, plans and projects were assessed together with the gaps and challenges with regards to changing risks. Plans were then developed based on the needs to reduce risks. The second workshop focused on consolidation of workshop results, validation and finalization of the 2011 Disaster Risk Reduction Plan. Finally, the planning workshop shall culminate with the presentation of the 2011 Disaster Risk Reduction Plan to the Philippines' President Benigno Aquino III with cabinet members concerned.

The A7 plan for disaster risk reduction incorporates climate change adaptation (based on the results of the vulnerability and adaptation assessments which assesses the changing risks and adaptation measures, but also building on existing knowledge of risk profiles and vulnerabilities: early warning systems (EWS), reforestation, resettlement, waste management, and flood control infrastructure) and also climate change mitigation (through reforestation) directly. All action points in the CSDRM approach are covered to some extent. At present though, this is still on planning stage. It is expected that for the rest of 2011, some of the LGUs of the A7 will initiate the vulnerability and adaptation assessments using part of their internal budget, while other items will undergo a process of resource sourcing and mobilization. Some of the areas covered by the A7 were also selected as a pilot ecotown of the Climate Change Commission in their realization of the National Climate Change Action Plan and discussions are underway for integration of the activities above. The progress will be reviewed as determined by the mechanisms formulated by the Technical Working Group of the A7, but no later than 1 year.

The case study was able to identify entry points for CSDRM through the analysis of the plans of each member local government unit. To determine the entry point for the A7, each LGU ranked their own entry points to each of the indicators in the CSDRM integration grid. The individual LGU ratings were then averaged to give an overall rating for the A7. The action point with the highest ranking is:

CSDRM Pillar 3: Address Poverty and Vulnerability and their Underlying Causes

EMPOWER: Empower communities and local authorities to influence the decisions of national governments, NGOs, international and private sector organizations and to promote accountability and transparency. Besides individual LGU activities related to good governance this entry point is also critical to the sustainability of the Alliance of Seven and resource mobilization amongst key stakeholders to realize the A7 plan.

Analysis of Opportunities & Barriers in using the CSDRM approach

Although the A7 plan was only finalized in July 2011 and is still in its infancy – the participants felt that it was timely to introduce this approach as it was used to validate that the disaster risk reduction plan was indeed climate smart. By using the tool at the individual LGU level for members of the Alliance of Seven, it was able to map out areas of cooperation between the members and was able to identify LGUs with particular strengths that could assist others whose challenges in this area remain. This will help the Technical Working Group plan the establishment of systems and operations for the Alliance.

Reflections on the CSDRM Tool

The researcher gained observations from the participants on the usability of the tool. The following were the responses given:

- Very rigorous
- Initially it was difficult to understand the action points and indicators due to the terminology and language used relating climate change and disaster risk
- Hard work but could appreciate the usefulness for the A7 as well as for the individual LGUs

The majority of participants concurred with these statements. For the researcher, the fact that the tool is evidence-based rather than relying only on anecdoctal accounts, makes it unique as compared to many outcome/impact level monitoring tools. It was also useful as a way to double-check planning processes and assess if they are climate smart. Once participants started using the tool, the process became easier. Although it could be used as a self-assessment tool there would have to be a level of guided assistance until a core group within the A7 becomes fully conversant with the tool. In assessing weaknesses it should be emphasized that these weaknesses are not going to be judged negatively but will be considered as areas to be prioritized through the enhancement of existing strengths to overcome them.

Learning Points from the Self-Assessment

On assessing the A7 plan vis-a-vis the action points – it shows that all points were covered. There were no activities that did not fit into the given indicators and the participants felt that the tool captured their planned activities, and confirmed their commitment to DRR and CCA integration. Re-using the tool at regular intervals was seen as beneficial as it would help ensure that they were on the right track towards achieving risk resilient communities.

SCR Partner: Philippines

San Francisco, Camotes Group of Islands, Cebu, Philippines

The municipality of San Francisco lies off the northeast coast of Cebu Island and is one of the four municipalities that constitute the Camotes group of Islands. The municipality has a total land area of 10,957 hectares and its population (based on 2010 census) is 45,125 people. It consists of 15 barangays (the lowest-level governmental unit in the Philippine political system), 12 of which are classified as coastal. Around 7,946.53 hectares are considered arable land and about 143 hectares are classified as forest/reservation/timberland.

Due to its distinct geographic location, San Francisco is considered vulnerable to typhoons and strong monsoon winds. Two types of monsoon winds—the northeast monsoon (Amihan) from December to February and the southwest monsoon (Habagat) from June to September—occur in the area. Being situated in a small island presents more challenges to its residents as access to supplies from the mainland is made more difficult by storms and strong winds. Heavy rainfall can also cause floods and landslides to low-lying areas of the municipality. The lack of water supply and inadequate irrigation facilities further increases the vulnerability of San Francisco to prolonged dry season commonly known as El Nino. Being a low-income town with people's livelihoods based mainly on fishing and agriculture, the risks disaster pose to people's lives are even higher as lack of financial and logistical resources may potentially constrain them from coping with various natural and human-made hazards.

Overall Objectives:
San Francisco aims to build its resilience by addressing the main hazards that the municipality is considered most vulnerable to. Those identified as 'high risk' hazards are typhoons, El Niño (drought), and monsoon winds. Flooding is considered a 'medium risk' hazard while landslides, lightning, tornados and fire are considered 'low risk'.

Intervention Components:
The DRM program of San Francisco consists of three integrated components, namely:

- Disaster Prevention which emphasizes coastal resource management (CRM), environmental protection and the building of resilient infrastructure;
- Disaster Mitigation which include "knowledge management", sustainable livelihood, social protection, risk assessment and hazard mapping, promotion of sustainable energy sources (i.e. renewables), institutions for early warning systems, expanding networks and monitoring/evaluating of DRM plans and implementation; and,
- Disaster Preparedness and Response which highlights organizing emergency response teams at the community level, conducting emergency drills and acquisition of equipment to enable efficient emergency and relief operations. These are outlined in their 5-year Municipal DRRM plan (2011-2015) that was crafted in March 2011 in partnership with the Municipal Disaster Risk Reduction Management Council (MDRRMC).

Municipality of San Francisco
Camotes Island
Cebu, Philippines

Students planting trees in protected area on Camotes Island. Every student in San Francisco plants 10 trees each school year in protected areas to offset carbon emissions and to protect against flooding and landslides.

CSDRM Pillar 2: Enhancing Adaptive Capacity

EXPERIMENT. San Francisco has identified this as a significant action point that should also be addressed in strengthening its people's abilities to experiment and innovate to reduce vulnerabilities. Thus they identified the following CSDRM action points as priorities to support advancements in their aim to improve CSDRM EXPERIMENT:
CHALLENGE: COLLABORATE, ASSESS, PLAN, ADVOCATE, EMPOWER

CSDRM Pillar 3: Address Poverty and Vulnerability and their Underlying Causes

A cross-departmental group from the Local Government Unit (LGU) in San Francisco selected action point **CHALLENGE** as their pathway to CSDRM integration in particular the need to promote more socially just and equitable economic systems. Having chosen to address weaknesses identified through the self-assessment process, this action point was selected as "this is what is most needed - *mao gyud ang gikinahanglan*".

Crucially the action point also reflects the current strategy of the Local Government Unit's development program which is driven by 'poverty alleviation' and a need to generate more livelihood opportunities. Hence the LGU felt that identifying Challenge as an entry point for CSDRM integration would not only serve the LGU's wider purpose but gain more support internally as it is already aligned with the agenda of the local government.

Learning Points from the Self-Assessments

The reflections of stakeholders in planning, implementing, monitoring and evaluating DRM programs in San Francisco using the CSDRM approach are shared below. The results are culled from the reflection session and self-administered evaluation and reflection form conducted during the self-assessment and planning workshop held in September 2011.

On successes and achievements:

- DRM programs are formulated, disseminated, and implemented through the Purok system Awards and recognised by the 2011 Sasakawa Award, Campaign Role Model for Making Cities Resilient and UNISDR Asia Pacific Champion, among others.
- Solid Waste Management being a learning hub in the country.
- Support of political leadership for DRM.
- Community participation in DRM programs.
- Developed mechanism for community mobilization of DRM programs.
- The "multiplier effect" of DRM on environmental issues in the municipality.

On obstacles and challenges:

- Lack of resources to carry out DRM plans.
- Absence of periodic monitoring and assessment of DRM programs.
- Lack of personnel to implement DRM plans.
- Lack of technical know-how.
- Resistance/reluctance of some locals to adopt new technologies and approaches.
- Lack of equipment to monitor weather conditions.
- Lack of financial ability to alleviate poverty in the municipality.
- Indifferentce and disengagement by some community members.

Requirements for CSDRM uptake:

- Operationalize CSDRM from the municipal level down to the Purok level, emphasizing PM&E processes
- Develop indicators more. appropriate to the local context using the outcome of the self-assessment.
- Develop a roadmap for integration focusing in particular on pillar 3, based on the priorities set by the DRM stakeholders.
- Formulate implementing guidelines at the municipal level for CSDRM.
- Develop a database to support planning and program implementation.
- Resource mobilization to help fund the operation of projects and programs.
- Capability-building activities for the enhancement of the Municipal Disaster Risk Reduction Management Council (MDRRMO).
- Technical assistance and financial support from other agencies and private institutions.

ANNEX 2

Governance in Climate Change and Disaster Risk Management

Country	Form of Government	Disaster Risk Reduction Governance	Climate Change Governance	Role of CSO and Other Stakeholders in Governance (i.e. DRR and climate change)	Economic System	Development Strategy
Indonesia	Republic	Ratified the Asian Agreement on Disaster Management and Emergency Response (AADMER); Disaster Management Law 24/2007; National Disaster Management Agency (BNPB); Strategic National Action Plan on DRR; Adopted HFA in 2005	Indonesia hosted COP13 in Bali in 2007 which delivered Bali Road Map. Indonesia also adopted climate change in its national development planning through the National Action Plan on Climate Change (2007) and also the National Response to Climate Change (National Development and Planning Agency Yellow Book for 2007 – 2009). Legal instruments include: Law No.32/3009 on Environment Protection and Management, which integrates climate change and the Presidential Regulation No.61/2011 on National Action Plan on GHG Emission Reduction. It also established the National Council for Climate Change (NCCC/ DNPI).	CSO role guarantee and clearly stated in the constitution and its amendment. Establish Civil Society Forum for Climate Justice and the National platform for DRR (Planas PRB)	Open market economy	Economic liberal with human development and sustainable development dimensions

Country	Form of Government	Disaster Risk Reduction Governance	Climate Change Governance	Role of CSO and Other Stakeholders in Governance (i.e. DRR and climate change)	Economic System	Development Strategy
Philippines	Democratic Republic	Ratified the Asian Agreement on Disaster Management and Emergency Response (AADMER); Republic Act 10121 (Disaster Risk Reduction and Management Council); National Disaster Risk Reduction and Management Council; Strategic National Action Plan on DRR;	National Climate Change Commission as provided for by Republic Act 9729; National Climate Change Strategy Framework developed on 2010; National Climate Change Action Plan 2011	People's participation in governance enshrined in the Philippine 1987 Constitution; RA 9729 recognizes the multi-stakeholder participation; Disaster Risk Reduction Network; Aksyon Klima, Resilience, Philippine Movement on Climate Justice, Philippine CC Initiative	Market-oriented economy	Neo-liberal with strong sustainable development dimensions

Country	Form of Government	Disaster Risk Reduction Governance	Climate Change Governance	Role of CSO and Other Stakeholders in Governance (i.e. DRR and climate change)	Economic System	Development Strategy
Cambodia	Constitutional Monarchy	Ratified the Asian Agreement on Disaster Management and Emergency Response (AADMER); National Committee on Disaster Management; Development of a Disaster Management Law; Strategic National Action Plan on DRR (2008-2013)	National Climate Change Committee; Cambodia Climate Change Strategic Plan; National Green Growth Roadmap	1993 Constitution Article 35 recognizes citizen participation through commune councils; Cambodia DRR Forum; National CC Network Cambodia; Cambodia Climate Change Alliance; Joint CC Initiative	Transition to a market economy	Rectangular strategy: with elements of economic liberalization and sustainable development

ENDNOTES

1 *The World Risk Report was compiled by the United Nations University Institute for Environment and Human Security's PREVIEW Global Risk data Platform, CReSIS, CIESIN and global data bases'. The report is available here: http://www.ehs.unu.edu/article/read/worldriskreport-2011*

2 *The reports ranking includes: exposure to natural hazards such as earthquakes, storms, floods, droughts and sea level rise; susceptibility as a function of public infrastructure, housing conditions, nutrition and the general economic framework; coping capacities as a function of governance, disaster preparedness and early warning, medical services, social and economic security; and adaptive capacities to future natural events and climate change.*

3 *Each of the variables used to compute the World Risk Index have corresponding indicators with raw data extracted from available global databases that were transformed to dimensionless rank levels. Once aggregated in each case into an index using weighting factors they have been converted to percentage values.*

4 *United Nations 2009, Mortality Risk Index, from http://www.unisdr.org/files/9928_MRIA3.pdf*

5 *UNISDR 2009, Global Assessment Report on Disaster Risk Reduction: Risk and Poverty in a Changing Climate accessed from http://www.unisdr.org/files/9414_GARsummary.pdf*

6 *As of 10 November 2011, about 1000 have reportedly lost their lives due to flooding in Thailand, Vietnam and Cambodia according to a report shared by the United Nations Office for the Coordination of Humanitarian Affairs, see: http://news.xinhuanet.com/english2010/world/2011-11/11/c_122263894.htm.*

7 *The World Bank 2011, Navigating Turbulence Sustaining Growth, World Bank East Asia and Pacific Economic Update 2011, Volume 2 accessed at http://siteresources.worldbank.org/INTEAPHALFYEARLYUPDATE/Resoures/550192-1321905171994/eap_update_nov2011_fullreport.pdf*

8 *UNISDR 2011, Global Assessment Report on Disaster Risk Reduction: Revealing Risk, Redefining Development, accessed from http://www.preventionweb.net/english/hyogo/gar/2011/en/bgdocs/GAR-2011/GAR2011_Report_Chapter2.pdf*

9 *Velasquez, J., Strengthening Climate Resilience (SCR) Initiative SCR Regional Workshop-SEA, UNISDR presentation for the SCR Regional Workshop-SEA held at Bangkok on July 2010.*

10 *This finding is also validated by the 2011 Views from the Frontline report see: http://www.globalnetwork-dr.org/images/documents/vfl2011_report/VFL2011_Core_Report_en.pdf*

11 *UNISDR Asia and Pacific, July 2011, At the Crossroads, Climate Change Adaptation and Disaster Risk Reduction in Asia and the Pacific: A Review of the Region's Institutional and Policy Context*

12 *Ibid*

13 *Changing Climate, Changing Disasters: Pathways to Integration (2011) Strenghtening Climate Resilience*

14 *The report of the SCR Regional Workshop held in Bangkok in 2010 is available at http://community.eldis.org/.59d5ba58/SCR-presentations.html*

15 *Dan Church Aid and Christian Aid, September 2011, Climate Change and Disaster Management Policy Mapping and Analysis, A Consultancy Report. Accessed at http://www.climatecapacity.org/files/RC_Reports%20and%20Cases/Consultancy%20report%20on%20cc%20policy%20mapping%20in%20Cambodia_final.pdf.*

16 *Ministry of Environment Republic of Indonesia, November 2010, Indonesia Second National Communication on Climate Change accessed at unfccc.int/files/national_reports/non-annex.../indonesia_snc.pdf.*

17 *Mitigation efforts in the the national communications for non-Annex I countries like Cambodia, Indonesia and the Philippines can be found at http://unfccc.int/national_reports/non-annex_i_natcom/submitted_natcom/items/653.php*

18 *Typhoons with wind speed greater than 150kph have been repeatedly recorded particularly during El Nino periods by the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA). PAGASA-DOST 2010, Climate Change Scenario for the Philippines, presented at Multi-Sectoral Consultative Workshops on the National Framework Strategy on Climate Change, 13-14 April 2010.*

19 *Mekong River Commission, September 2009, Adaptation to Climate Change in the Lower Mekong River Basin: Regional Synthesis Report., MRC Technical Paper No. 24. See Cambodia NAPA*

20 *Climate Change Commission, 2011, National Climate Change Action Plan, accessed at http://www.climate.gov.ph/index.php/en/nccap-executive-summary.*

21 *Ministry of Environment Republic of Indonesia, November 2010, Indonesia Second National Communication on Climate Change accessed at unfccc.int/files/national_reports/non-annex.../indonesia_snc.pdf.*

22 *A Purok "Capital Build Up" programme has people depositing an amount agreed on by residents as initial capital for emergency purposes. This has increased fluid assets of the Puroks to use as a post-disaster assistance fund. With limited access to the Internet, cellphones and radios, the Purok system is used to disseminate information and risk assessments, with Purok coordinators acting as couriers of information to the residents. To strengthen the city's human resources capacity and to complement the effort of everyday citizens, teachers are sent to seminars and trained on solid waste management and disaster risk reduction.*

23 *San Francisco Island's purok system received the 2011 UNISDR Sasakawa Award for Innovation – see http://www.unisdr.org/we/campaign/sasakawa/2011#sanfrancisco*

24 *see www.amcdrrkorea.org for the proceedings of the event.*

25 *see www.aseansec.org/25407.htm for the Joint Statement for the Asian Ministerial Conference on DRR on November 2010 at Incheon, South Korea.*

26 *With especial reference to climate related disasters e.g. typhoons and associated flooding events*

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