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# Climate Change Adaptation and Disaster Risk Reduction Institutional and Policy Landscape in Asia and Pacific

International Strategy for Disaster Risk Reduction (ISDR) – United Nations

*Meeting on the Institutional Framework for Disaster Risk Reduction in Latin America and the Caribbean, Asia and Africa*

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**Climate Change Adaptation  
and Disaster Risk Reduction  
Institutional and Policy Landscape  
in Asia and Pacific**

Draft – 5 August 2010 for consultation

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**APPENDIX 1A – LIST OF REGIONAL PROJECTS**

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This report was prepared by Phong Tran and Jerry Velasquez. Sections of the enabling environment analysis were based on a paper on regional cooperation by Mr. Dhar Chakrabarti of the SAARC Disaster Management Center and on a consultancy report on the same topic for the Pacific region done by John Hay for UNISDR Sub-regional Office in the Pacific and UNDP Pacific Center.

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# 1. Introduction

The Asia and Pacific region is the world's most disaster prone. There are a number of disaster risk hotspots in the region, and it is expected that existing risk patterns will intensify as a result of climate change. Responding to these challenges, the Asia and Pacific region has witnessed promising developments to advance disaster risk reduction (DRR) and climate change adaptation (CCA) at regional, sub-regional, and national levels.

The DRR and CCA represent policy goals, one concerned with an ongoing problem (disasters) and the other with an emerging issue (climate change). While these concerns have different origins, they overlap a great deal through the common factor of weather and climate and the similar tools used to monitor, analyze and address adverse consequences. It makes sense, therefore, to consider them and implement them in a systematic and integrated manner.

DRR is the concept and practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and the improved preparedness for adverse events (UNISDR, 2009). CCA means the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (United Nations Framework Convention on Climate Change-UNFCCC).

Risk reduction is a common converging goal for CCA and DRR. Both CCA and DRR have an objective of reducing factors that contribute to climate-related risk. Both approaches envisage pro-active anticipatory actions to reduce climate risk of different time scales. The notion of possible emergence of historically not experienced climate risks due to climate change could entail disaster risk management to deal with uncertainty and new pattern of risks. Disaster risk management has a history of evolving, adapting and applying new tools and practices to deal with new information and emerging social and economic demands. IPCC Fourth Assessment Report emphasizes the importance of iterative risk management approach.

DRR and CCA share a common feature. They are not sectors in themselves but must be implemented through the policies of other sectors, in particular, those of agriculture, water resources, health, land use, environment, finance and planning. There are also linkages with other policies, most notably poverty eradication and planning for sustainable development, and education and science.

The long historical experience in implementing DRR can contribute greatly to adaptation, in terms of policy and institutional approaches as well as technical methods and tools. These include the Hyogo Framework for Action, legislation development, multi-stakeholder national platforms, technical networks, and approaches to community capacity building, along with hazard and vulnerability assessment, land use planning and environmental protection, construction of dams, dykes and seawalls, early warning systems, and community education and resilience programs. It is vital for adaptation policy-makers and managers to use and build upon these existing capacities and resources rather than starting

afresh. Equally, many of the approaches being developed for CCA, such as vulnerability assessments, sectoral and national planning, capacity building and response strategies, are directly supportive of DRR.

However, in most countries, the two policy fields have operated largely in isolation from each other. In many ways, we may say that DRR and CCA are different only because of the different political history that shaped current institutional structures. Environment authorities usually have responsibility for CCA, whereas authorities for disaster management, civil defense, and home affairs typically have responsibility for DRR. Interactions between these institutions are usually *ad hoc*, for example through meetings for report preparation, and there are only very limited efforts to sustain and institutionalize these interactions. This creates a knowledge and practice gap that most DRR actions can contribute to CCA, but there is often no mechanism to transfer this knowledge, tools and practices for climate change adaptation. There are still very limited efforts to sustain and institutionalize these interactions. The real limitation to adaptation is the political dimension associated with issues of compensation forcing policy makers to isolate climate risks attributable to anthropogenic causes from natural climate variability.

Regional organizations, donors, inter government organizations, and national governments are seeing the shortcomings of such approaches and are seeking to systematically link DRR and CCA, often as an element of their development planning. There is a need for an enabling environment and for the development of a roadmap for the practical integration of DRR and CCA in Asia and Pacific region. This regional policy and institutional mapping is the first step to address the issue.

At the regional level, the mapping presents an overview of past, ongoing, and planned interventions by various regional organizations, inter governmental organizations, United Nations (UN) organizations, and the institutional landscape on DRR and CCA in Asia and Pacific region. At the national level, the mapping provides an overview of the institutions and involved in DRR and CCA and their policies, plans and statements, as well as activities that are underway covering both topics.

The information contributes to improved regional planning and programming for DRR and CCA, and highlight areas for cooperation among regional and sub-regional organizations. It will add to periodic progress reviews and reporting processes at regional and sub-regional levels, such as the biennial HFA progress reviews and preparation of the 2011 UN Global Assessment Report. It will also assist donor agencies and decision makers channel resources and efforts to meet their own policy and program imperatives while implementing DRR and CCA.

The institutional and policy mapping also supports both national and regional stakeholders in DRR and CCA, such as Governments, UN agencies, intergovernmental organizations, research and technical organizations, nongovernment organizations, and especially the ISDR Asia Partnership on Disaster Reduction (IAP) members, who will use the results for enhanced regional planning, programming, and cooperation. In addition, national DRR and CCA stakeholders (national governments, UN agencies, research institutions and universities, the private sector, and donor agencies) will benefit by receiving more coherent

regional assistance and greater clarity on the type of regional support they may be able to access which will enhance their own DRR and CCA goals and implementation of the HFA nationally.



## 2. Regional policy landscape on DRR and CCA

***At the regional level, there is a large area of methodological overlap between DRR and CCA policies. These similarities should ideally drive the necessary linkages between implementation processes and mechanisms, including funding of activities. The review reveals that regional efforts entail greater investment in underlying sources of vulnerability when the recipients have lower capacities. Although calls at the regional level for better integration between efforts on DRR and CCA are growing, there seems to be still little capacity for governments to systematically organize and prioritize the activities they need for DRR and CCA. The present regional focus on building capacity and on reducing the underlying sources of vulnerability may be an opportunity for looking at no-regrets approaches for CCA and DRR putting these activities concretely into more immediate development contexts.***

### 2.1. Policy mapping typology

There are two roughly perspectives in the efforts of regional policies, programs and projects on DRR and CCA: one focuses on creating response mechanisms to specific impacts associated with climate change, and the other on reducing vulnerability to climate change through building capacities that can help deal with a range of impacts. The first approach uses understood impacts as a starting point for planning DRR and CCA activities. A more vulnerability-focused approach, on the other hand, starts by targeting the underlying factors that cause climate change to be harmful.

In practice, many instances of CCA and DRR fall between the extremes of vulnerability and impacts foci: actions are taken with a specific type of impact in mind, but nevertheless involve activities with more general benefits in reducing vulnerability. One way of framing this diversity is as a continuum between activities highly focusing on reducing vulnerability/building adaptive capacity on one hand and very explicit climate change adaptive measures on the other. According to UNFCCC, “CCA is a process through which societies make themselves better able to cope with an uncertain future. CCA entails taking the right measures to reduce the negative effects of climate change by making the appropriate adjustments and changes”. CCA is about *building adaptive capacity* and carrying out *appropriate adaptive measures*.

- Adaptive measures seek to address climate change impacts by, for example, a new seawall, crop insurance schemes, research on heat and drought tolerant crop varieties, agricultural diversification, vaccines, upgraded drainage systems, enhanced water use efficiency, enlarged reservoirs, or revised building codes.
- Building adaptive capacity aims to address the multiple drivers of vulnerability, including

poverty. Between building adaptive capacity and instituting adaptive measures, there exists a continuum of adaptation activities.

Figure 1 represents one way of mapping out regional efforts on DRR and CCA. On the left-hand side of the continuum, the most vulnerability-oriented adaptation efforts overlap almost completely with DRR practice, where activities take little or no account of specific impacts associated with climate change, and have many benefits in the absence of climate change. On the far right, highly specialized activities exclusively target distinct climate change impacts. In between lies a broad spectrum of activities with gradations of emphasis on vulnerability and impacts. The continuum can be roughly divided into four types of adaptation efforts (from left to right):

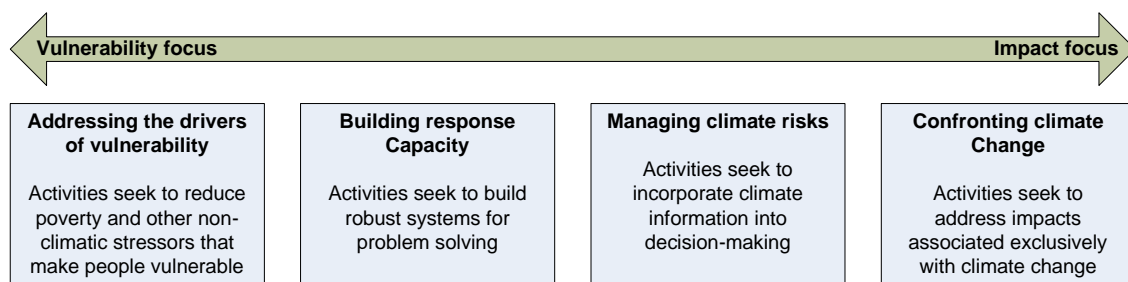


Figure 1: Spectrum of focus of CCA activities (source: adapted from WRI, 2007)

### 2.1.1. Addressing the Drivers of Vulnerability

At the left end of the spectrum, activities are fundamentally about reducing disaster risks. These activities focus on reducing community vulnerability and addressing other fundamental shortages of capability that make people vulnerable to harm, regardless of whether the stressors that can lead to harm are related to climate change. Example activities include efforts to reduce earthquake vulnerability, earthquake disaster education etc. Very little, if any, attention to the specifics of climate change is paid during these interventions; these activities buffer households and communities from the effects of climate change simply because they buffer them from nearly all sources of harm. Many of these activities are capacity-building activities that strengthen individuals' abilities to take action. One capability often fostered is the ability to "cope," or take action toward off immediate risk from climatic events (e.g., taking shelter to survive a storm, or saving enough food to survive a drought).

Often, vulnerability must be dealt with before more impact-oriented efforts can be effective. In other cases, however, vulnerability-oriented efforts can be conducted concurrently with more impacts-oriented initiatives. In the data set, 84 percent of the examples characterized as vulnerability focus (the projects focusing on addressing the drivers of vulnerability and building response capacity) also included activities that more directly focused on impacts associated with climate change (the projects focusing on managing climate risks and confronting climate change).

However, because climate change effects are not taken into account, some interventions at the left of the continuum run the risk of mal-adaptation. For example, while diversifying

agricultural livelihoods typically reduces vulnerability and strengthens resilience to reduce flood risks, if these efforts that cannot withstand increased flood conditions due to impact of climate change they could undermine DRR gains over the longer term if floods become more frequent. Likewise, while coping capacity can be critical for surviving short-term dangers, repeated coping may undermine long-term adaptation.

### **2.1.2. Building Response Capacity**

In this zone of the continuum, the effort focuses on building robust systems for problem solving. These capacity-building efforts lay the foundation for more targeted actions and frequently entail institution-building and technological approaches. Examples include the development of communications systems and planning processes, and the improvement of mapping, weather monitoring, and natural resource management practices. Many activities that build capacity were DRR activities to which an adaptive function was ascribed only after the fact, but many such activities are also incorporated into CCA efforts.

### **2.1.3. Managing Climate Risk**

When efforts focus more specifically on hazards and impacts, an important framework for action is provided by the concept of climate risk management (CRM). CRM refers to the process of incorporating climate information into decisions to reduce negative changes to resources and livelihoods. This framework accommodates the fact that often the effects of anthropogenic climate change are not easily distinguished from the effects of events and trends within the historic range of climate variability. The CRM approach encourages managing current climate-related risks as a basis for managing more complex, longer-term risks associated with climate change. Many DRR activities fall into the CRM category, as do many technological approaches (e.g., drought-resistant crops). Climate-proofing projects most often fall into this category, though many CCA projects also focus on CRM.

The success of CRM depends heavily upon the availability of climate information, and is enhanced when climate change predictions can be made with relatively high certainty and precision. If CCA initiatives plan too concretely based on risk assessments that turn out later to have been inaccurate, investments may be wasted, and mal-adaptation could result.

### **2.1.4. Confronting Climate Change**

For a small set of examples of regional efforts, actions taken focus almost exclusively on addressing impacts associated with climate change. Typically, these actions target climate risks that are clearly outside of historic climate variability, and have little bearing on risks that stem from anything other than anthropogenic climate change, such as efforts to respond glacial melting. Radical or costly policy and technological approaches that address unprecedented levels of climate risk also belong in the highly targeted category. Few of these approaches have been seen to date, but efforts in the Himalayas to prevent harms from glacial melting are signs of things to come.

Because measures that are highly targeted at climate change impacts do not address non-climate change challenges, they tend to require new approaches that fall outside of the relatively well-understood set of practices that we might think of as a DRR comfort zone.

This level of innovation usually takes the form of a discrete effort, and is often both costly and fundamentally challenging to cultural and political norms.

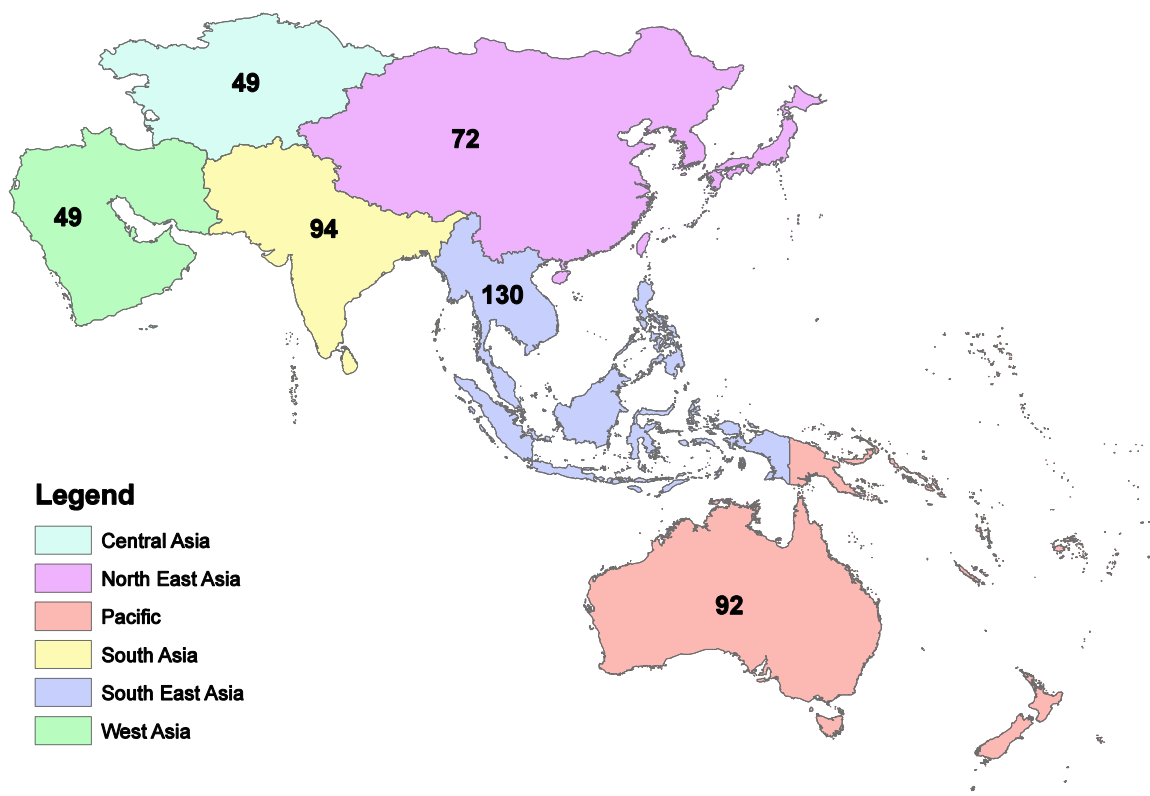
As such, many measures in this continuum zone take on an extreme quality, and many people, quite rightly, wish to avoid them. This is one reason we see so few activities from this category in our set of examples. A more important reason, however, is that, at least for the moment, climate change effects and “normal” climate variability are difficult to disassociate. Therefore, we see more adaptation approaches that address climate change and other sources of risk together using a CRM approach. Given the current state of climate change, highly “impacts-targeted” activities also require long-term planning, since the most clearly distinguishable impacts of climate change are still years or decades from being felt in many places.

The typology developed here does not attempt to rank the different types of regional efforts; rather, it simply attempts to describe present regional efforts in Asia Pacific. The typology also should not be thought of as a series of stages over time, with highly targeted climate change activities as the ultimate goal. It is clear, however, that addressing vulnerability drivers, building response capacity, and managing climate risk do augment one another. There are many examples where initiatives incorporate elements of two or three of these approaches.

## **2.2. Regional efforts on DRR and CCA**

Building on practical examples, the analysis reviews a series of regional DRR and CCA activities to better understand the trends and focuses of regional activities. To review the regional projects related to DRR and CCA, a questionnaire was sent to all relevant actors to collect the information on organizational information, major approaches, and key regional projects related to CCA and DRR implemented by each actor (see annex 1 for the questionnaire). There are 181 regional projects reviewed in this study (see the list of regional project in excel file). Partners submitted most of the regional project information. However, some of regional projects have been reviewed by the author and checked by the organizations on the classified objectives, the guidance of government and the HFA priorities. Activities in the database range from concrete projects to policy development efforts, and only activities at regional scale are considered in this analysis. The review tried to capture the full diversity of current efforts that may help us understand the trends of regional DRR and CCA activities. Each regional program/project or policy was reviewed to ascertain whether the original initiative focused on reducing vulnerability or impact based on four sub-categories presented in Figure 1.

Of the cases examined, the largest sub-regional grouping was found in South East Asia, followed by South Asia, Pacific, North East Asia, and Central and West Asia (Fig 2). By far, the majority of cases had a vulnerability focus (82%), while regional efforts with impact focus appear to be limited (18%). Most of regional efforts were initiated by regional organizations and only few regional projects initiated by national governments with supports of regional organizations (see Table 1).



**Figure 2:** Number of regional projects by sub-regions

**Table 1:** Number of regional projects by the guidance of the governments

Guidance of government	Number of regional projects	Percentage of regional projects
Initiated by national governments with support of organization	4	2
Initiated by organization and adopted by national governments	21	12
Initiated by the organization	156	86
<b>Total</b>	<b>181</b>	<b>100</b>

**Table 2:** Number and percentage of regional projects by main objectives

Main objective of regional project	Number of regional projects	Percentage of regional projects
Addressing the Drivers of Vulnerability	19	10
Building Capacity on DRR	130	72
Managing Climate Risk	29	16
Confronting Climate Change	3	2
<b>Total</b>	<b>181</b>	<b>100</b>

In looking at the objectives of activities, it is revealed that sometimes adaptation is viewed as a means to achieve a DRR objective, while other times DRR provides a means to achieve an adaptation objective. This dual relationship is positive when the two objectives are

viewed as supporting each other; they both are more likely to be achieved. Given the current interest in integrating CCA into DRR and vice versa, however, the two are treated as dual objectives, rather than ends and means.

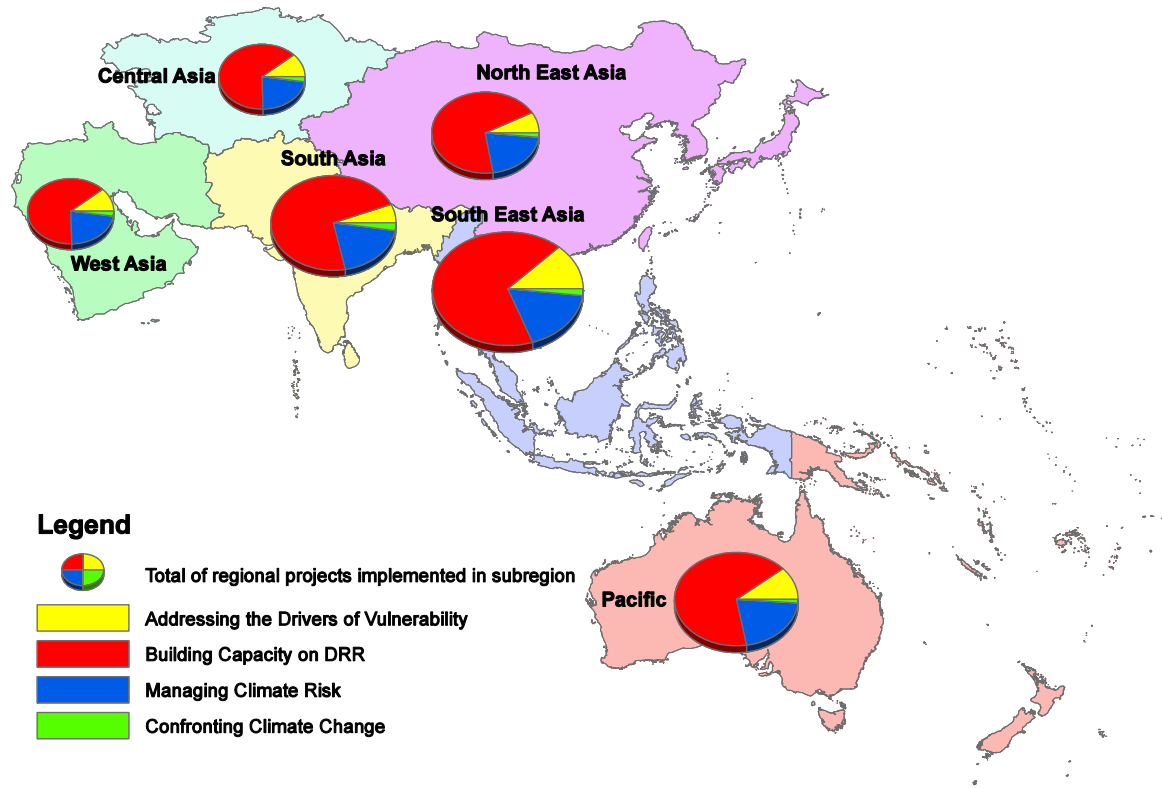


Figure 3: Number of regional projects by main of objective in each sub-region

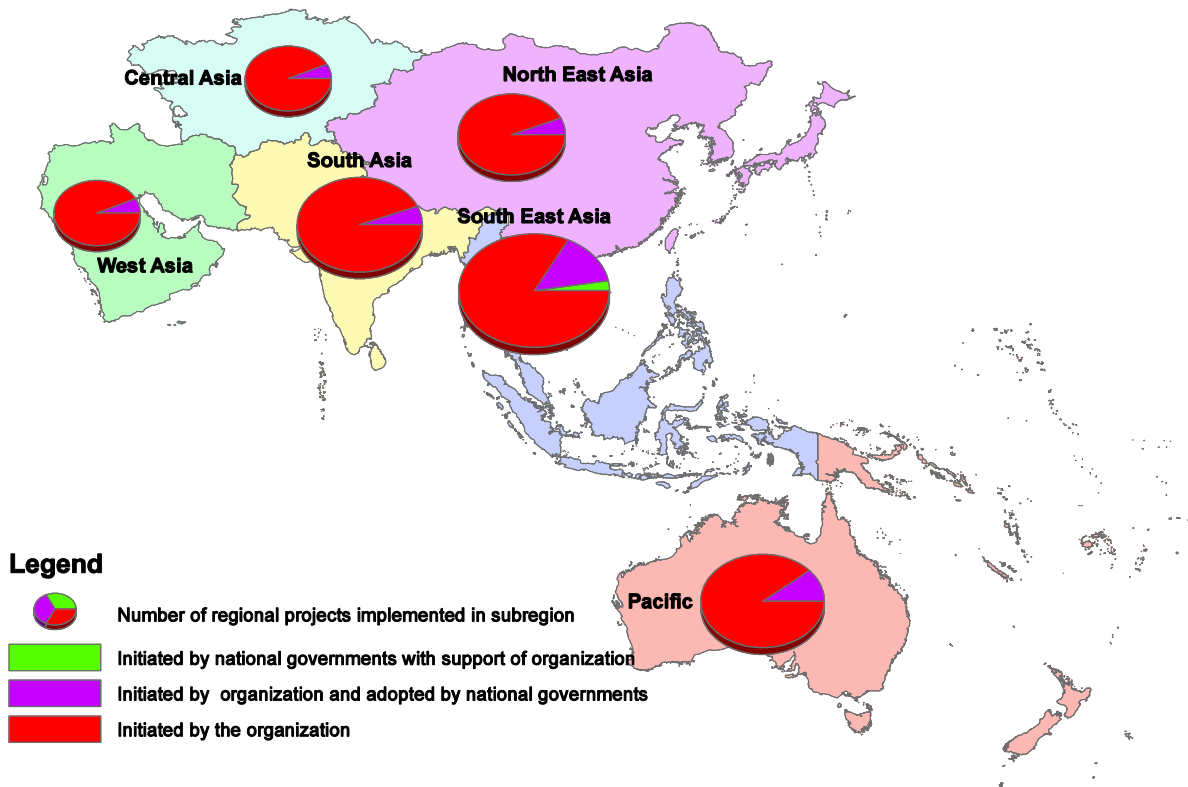


Figure 4: Number of regional projects by government guidance in each sub-region

Table 3: Number of regional projects by HFA priorities

HFA priority	Number of regional projects	Percentage of regional projects
HFA1	33	18
HFA2	17	9
HFA3	38	21
HFA4	60	33
HFA5	33	18
Total	181	100

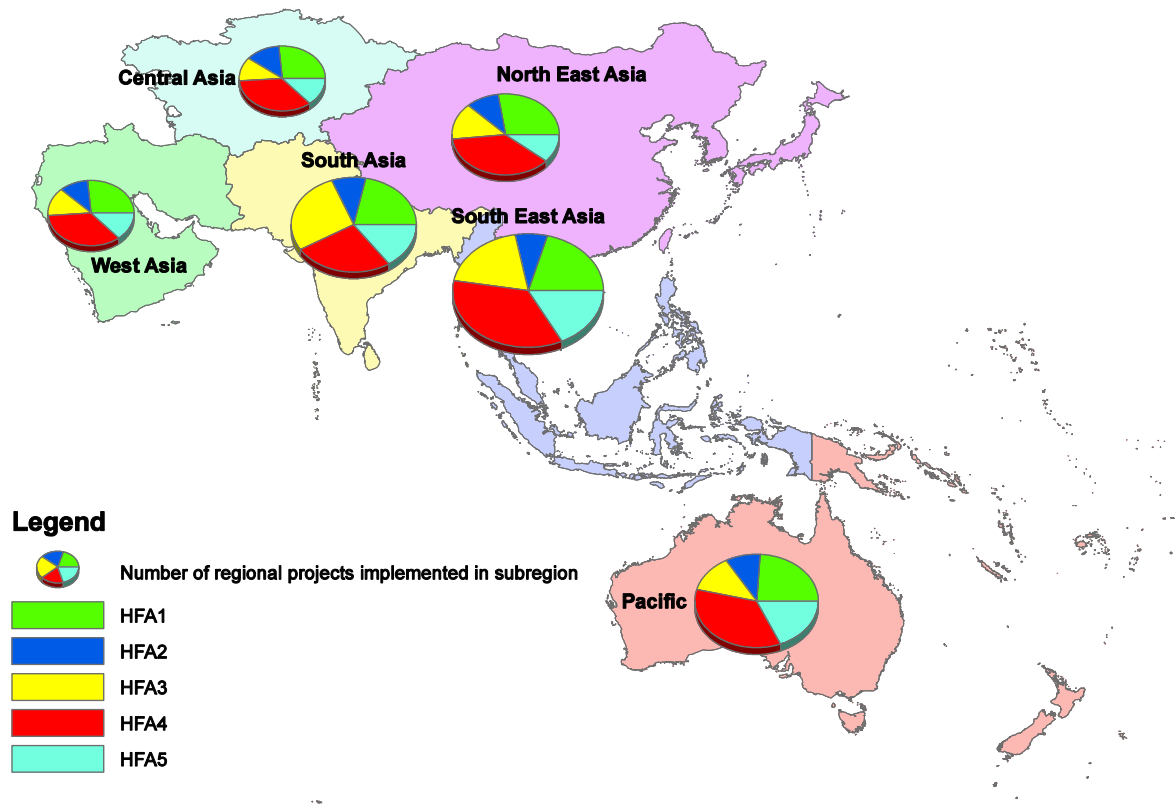


Figure 5: Number of regional projects by HFA priorities in each sub-region

### 2.3. Initial findings from regional policies and project review

Exploration of the strategies used in the cases finds that a significant area of overlap between CCA and DRR is methodological. Even when adaptation is the primary objective of an activity, efforts labeled CCA almost always utilize strategies that look remarkably like those used in DRR. This suggests that if there are uniquely CCA elements to these efforts, they are those involved in defining problems, selecting strategies, and setting priorities, not in implementing solutions. Further work to survey these planning processes could perhaps identify clearer ways to distinguish CCA from DRR efforts.

Two factors appear to predominate in shaping the characterization of regional efforts on DRR and CCA: the existing capacity of those responding and the certainty of information about climate impacts. Lower levels of capacity necessitate greater investment in addressing underlying sources of vulnerability (i.e., adaptation efforts more to the left of the continuum). Higher certainty regarding climate change prediction enables efforts to more directly target specific impacts (i.e., on the right of the continuum). However, it is important to note that neither of these drivers has a linear relationship to how closely efforts may target a specific impact. For example, in a case where storm risks are very well understood, a CRM approach may be impossible if basic communications infrastructure does not exist. In this case, the broader capacity building involved in creating the communications infrastructure would be an adaptation priority, even though information may exist that could support more impacts-targeted efforts.



Notably, the type of impact does not always drive the response taken. A country or community faced with a given change in climate can select from among a range of responses. For instance, as coral reefs die off from ocean warming, coastal communities may be more exposed to storm surges. One response may be to build artificial reefs to mitigate surges—an activity that would fall on the right of the continuum. Conversely, building more permanent and robust housing and infrastructure may enhance the resilience of coastal communities while fitting a broader set of development needs—placing it more centrally along the continuum. Taking a response from the far left of our continuum, broad capacity building may be needed to equip the affected communities to make the appropriate choices for facing these and any other consequences associated with climate change.

It seems likely that other factors, such as the specificity, severity, and immediacy of an impact, as well as people’s perceptions of risk and access to information, may play a role in determining the appropriate extent to which interventions should target specific impacts. Further exploration of such factors is needed to better understand when to home in on specific impacts and when to build more broadly applicable capacities.

Because of the overlap of DRR and CCA strategies, many activities undertaken to achieve DRR objectives have outcomes that also support adaptation. The adaptation function of many DRR initiatives was noticed or emphasized only after the start of the project—and sometimes even after its completion. However, whether or not the adaptive function of a DRR initiative is noticed or articulated does not change the adaptive value of the activity. Moreover, retrospective examination of work to find adaptation effects can serve a valuable learning function by helping to identify the universe of relevant strategies, understand the scope of current work that supports adaptation, and prioritize areas for future investment.

In a number of cases, additional activities were added to an ongoing DRR initiative to ensure its success under a changing climate. In these cases, adaptation is seen as a means to achieve DRR goals, this falls under climate resilient DRR activities, in which information about climate is integrated into DRR activities or additional DRR related components are made to reduce or eliminate climate change risks. However, not all climate-resilient DRR efforts take the form of activities added to ongoing DRR programs or projects. Some DRR efforts take a climate-resilient approach from the start. In these cases, climate change predictions are usually used to help shape plans for DRR projects. These projects were mainly coming from regional DRR communities.

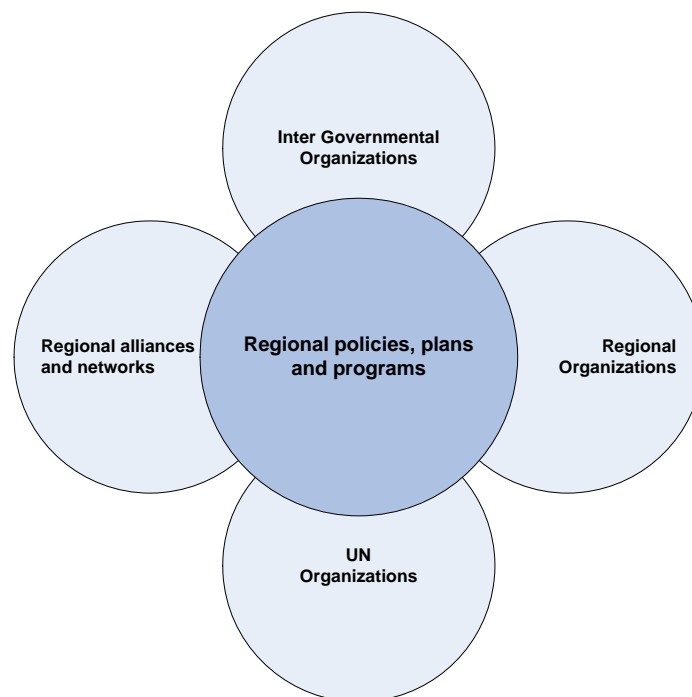
There are initiatives in which adaptation to climate change is the primary objective. From the beginning, the implementers of these efforts have climate change in mind. However, methods and strategies for achieving adaptation objectives may be drawn from the DRR experiences and DRR outcomes may be seen as a means to an adaptation end. The initiatives applying this approach were mainly come from environment communities and were classified into impact focus groups. The objective-based typology described above is helpful in describing the current landscape of DRR and CCA efforts. It highlights valuable assessment processes and learning that have emerged as the DRR community turns an adaptation lens to existing strategies and projects.

### 3. Regional institutional landscape on DRR and CCA

*The UN has the most number of institutions active in Asia Pacific engaged in DRR and CCA. Multilateral and bilateral funding institutions and UN agencies are the ones that have started on activities that address climate impacts focusing more on managing climate risks. Of the ongoing activities, IGOs and multilateral and bilateral funding institutions have activities that have closer Government ownership, which naturally comes with the nature of these organizations.*

#### 3.1. Institutional mapping typology

Regional institutions plans, programs and policies on DRR and CCA in the Asia-Pacific region, like in other regions, have been advanced through four different institutional types.



**Figure 6:** Circles of Regional Cooperation on Disaster Risk Reduction (source: Dhar Chakrabarti, 2010)

The first and the foremost are legally established regional Inter-Governmental Organizations, such as the ASEAN, SAARC, and SOPAC, through which sovereign states cooperate. Different regions of the Asia-Pacific have been able to achieve different levels of progress in DRR and CCA, based largely on the profile of risks of the region, and climate change impact projections.

The second circle represents a wide range of institutions and organizations that are regional in nature but are not based on the initiatives of the sovereign States, although national governments may be associated with such ventures. Such organizations may broadly be of four different types: (a) organizations created with support of national governments and other agencies such as ADPC, ADRC, MRC, (b) scientific, technical, academic and professional organizations working on different aspects of DRR and CCA such as Kyoto University (c) regional associations of media, corporate sectors etc taking occasional interests and initiatives in DRR and CCA, and (d) regional NGOs, voluntary and humanitarian organizations involved with CBDRM and community based climate change adaptation.

The third circle represents the United Nations and its various agencies, through the coordinated efforts of the UNESCAP, UNEP, and UNISDR. The multi-lateral financial institutions like the World Bank and its trust fund - the Global Facility for Disaster Recovery and Reduction - and the region's own Asian Development Bank which also supports national and regional initiatives for DRR and CCA in the region.

The fourth and the final circle of regional institutional and policy on DRR and CCA are the regional alliances and networks in which interested actors such as the scientific, technical, academic, media, corporate sector, humanitarian agencies, international organizations and or the multi- financial institutions have joined together to support the DRR and CCA initiatives and programs in the region.

## **3.2. Regional institutional landscape**

### **3.2.1. Regional Inter-Governmental Organizations**

Regional Inter-Governmental Organizations have usually been created through regional treaties or charters signed by the sovereign States of the region, which define the mission and objectives, the broad areas and functions of cooperation, the institutional mechanisms, the decision making system, funding arrangements etc. The areas of regional cooperation in such a generic arrangement usually cover a wide range of issues such as security, trade, immigration, customs, environment, science and technology and so on. DRR and CCA do not usually find specific mention in regional charters, but it is covered within the broad objectives and missions of 'sustainable development', 'welfare of people' or 'protection of environment'. The growing concerns about the increasing incidence of disasters and the need for enhanced regional cooperation to address to the trans-border issues of such disasters and climate change have encouraged many regions to make special legal and institutional arrangements for strengthening regional cooperation for reducing the risks of disasters and for responding to disasters in a coordinated manner.

Some regions of the Asia-Pacific have made significant progress in regional cooperation on DRR and CCA, while for others the subject is still not a very high priority area for collaboration. The relative importance given by the regions on the issues of DRR and CCA and the progress achieved have been influenced by a multiplicity of factors such as vulnerability of the region to disasters, recent mega disasters and the general level of cooperation among the countries of the region, which again are conditioned by various strategic economic and political interests of the countries, legacies of past conflicts and differences and the vision of political leadership in the region. Sometimes asymmetrical

relationship of countries in the region terms of area, population, military strength or economic power have created deposits of trusts or mistrust that have either facilitated or hindered the process of regional cooperation. Sometimes the dynamics of intra-regional conflicts and collaborations have pushed bi-lateral or sub-regional cooperation ahead of regional collaboration. In some cases the specific issues of collaborations remained relevant only for a few countries of the region, thereby encouraging the growth of focused sub-regional collaboration.

The trajectory of regional cooperation among the sovereign states of the region has followed a general pattern. Such cooperation usually begins with a phase of declarations and resolutions followed by the stage of building of systems and institutions, which create the foundation for more concrete collaborations in terms of regional action plans and programs. Some regions of the Asia-Pacific have remained locked in the phase of declarations while a few regions have graduated to the phase of active collaborations with varying degrees of successes. The following organizations are the key inter governmental organizations in Asia Pacific.

**Table 4: Inter government organizations in Asia Pacific working on DRR and CCA**

No	Name of IGOs	Sub-region	Institutional arrangement for DRR and CCA
1	Association of South East Asian Nations (ASEAN)	South East Asia	Separate people and department dealing with DRR and CCA
2	Asia-Pacific Economic Cooperation (APEC)	East, South East and Pacific	DRR and CCA is an emerging concern. There is one focal point for DRR and CCA with no specific department dealing with this issue in the secretariat
3	The Mekong River Commission Secretariat (MRC)	South East Asia	Separate people and department dealing with DRR and CCA
6	Southeast Asian Fisheries Development Center (SEAFDEC)	South East Asia	CCA is an emerging concern. DRR is not the main focus of the organization
4	South Asian Association for Regional Cooperation (SAARC)	South Asia	One center focusing on DRR with specific attention to the impact of CC. Same focal point for CCA and DRR
5	South Asia Cooperative Environment Program (SACEP)	South Asia	DRR is not included in the work program. CCA is one of three priorities of the organization
7	The Pacific Islands Applied Geoscience Commission (SOPAC)	Pacific	CCA and DRR is well integrated in the institution
8	Secretariat of the Pacific Community (SPC)	Pacific	Only CCA is the main focus
9	The Pacific Regional Environment Program (SPREP)	Pacific	Only CCA is the main focus

### 3.2.2. Regional Organizations

Regional organizations working on DRR and CCA are few in numbers, and often based in capital cities. There is a gap in strong, high quality institutions amongst sub-regions, especially in West and Central Asia. Among the regional organizations working on DRR and CCA, the list of key regional organizations need a special mention.

1. Asian Disaster Preparedness Centre (ADPC)
2. Asian Disaster Reduction Centre (ADRC)
3. World Wide Fund for Nature (WWF)
4. The World Conservation Union (IUCN)
5. CARE
6. Stockholm Environment Institute (SEI)
7. Institute for Global Environmental Strategies (IGES)
8. International Centre for Integrated Mountain Development (ICIMOD)
9. International Federation of Red Cross and Red Crescent Societies (IFRC)
10. Graduate School of Global Environmental Studies of Kyoto University
11. Japan Aerospace Exploration Agency (JAXA)
12. Asian Institute of Technology (AIT)

The **Asian Disaster Preparedness Centre (ADPC)** was established in 1986 as an outreach activity of the Asian Institute of Technology in Bangkok, with support from the Government of Thailand, on the recommendation of UN Disaster Relief Organization, with the aim of strengthening the national disaster risk management systems in the region. In 1999, ADPC became an independent entity, governed and guided by a Board of Trustees (21 members representing 15 countries) and advised by a Regional Consultative Committee (32 members from 26 countries) and an Advisory Council (55 members from a wide range of agencies). The focus of the ADPC has also shifted from disaster response and preparedness to risk reduction and mitigation.

‘Safer communities and sustainable development through disaster risk reduction’ is the vision of ADPC, which is in tandem with the Hyogo Framework of Action and its mission is to mainstream disaster reduction in development, build and strengthen capacity and facilitate partnerships and exchange of experiences. In accomplishing its mission, ADPC has developed and implemented cross-sectoral programs and projects in different thematic areas disaster risk management, such as (a) Climate Risk Management, (b) Community-Based Disaster Risk Management, (c) Disaster Risk Management Systems, (d) Public Health in Emergencies, (e) Training Resources and (f) Urban Disaster Risk Management. The contributions made by ADPC in development of capacities, systems and processes in different regions of the Asia-Pacific, particularly in the South East and South Asia are widely acknowledged.

The mechanism of Regional Consultative Committee that involves high level policy makers of the national governments of 26 countries (10 South East, 8 South, 3 East, 2 each from Central and West Asia and 1 from the Pacific) in annual meetings on specific themes, hosted by the national governments, has played significant role in promoting regional and sub-regional cooperation for disasters risk mitigation and preparedness. Since 2000 eight such meetings have taken place in the region, each contributing to better understandings of the current and future disaster risk management challenges and issues. The accumulated operational experience and expertise of ADPC has been useful in providing valuable technical support to the national governments and regional organizations towards their efforts for disaster risk management.

The **Asian Disaster Reduction Centre (ADRC)** Kobe was set up in 1998 by the Government of Japan with mission to enhance disaster resilience of the Asian countries and communities

and to establish networks among countries through various programs including exchange of personnel working in the field of disaster risk management. So far 28 countries of the Asia-Pacific (9 South East, 6 South, 4 East, 7 Central and 1 each from West Asia and the Pacific) have joined this network.

The most significant contribution made by the ADRC is the Sentinel Asia project, which is an initiative for establishing a disaster management support system for the Asia-Pacific region utilizing the data from earth observation satellites. The project involves 51 organisations including 44 agencies from 18 countries and 7 international organisations for emergency observation of major disasters through remote sensing data received from the satellites, interpretation of the data and their conversion into digital maps easily accessible and understandable to disaster risk managers in the region.

ADRC maintains a repository of data and good practices on disaster management in the Asia-Pacific region, conducts studies for the promotion of disaster reduction, develops education and training materials for dissemination of knowledge and capacity building and organizes various conferences and workshops on various general and specialized themes. The annual Asian Conference on Disaster Reduction convened by the ADRC in January every year, coinciding with the anniversary of Kobe earthquake, is participated by disaster management officials from the member countries and experts from international organizations to promote information sharing, exchange opinions, and enhance partnerships among participating countries and organizations.

The **International Centre for Integrated Mountain Development** (ICIMOD) is a regional centre of eight member countries– Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – that seeks to study the dynamics of mountain ecosystems and livelihoods in the Hindu Kush-Himalaya region in the contexts of climate change and globalization. Set up in 1983 the Centre has passed through its formative years of documentation and information sharing and implemented Regional Collaborative Program Phase I (1995-98) and Phase II (1998-2002) which significantly enhanced the knowledge and capacity of the mountain people in understanding the changes, adapt to them, and make the most of new opportunities. Three key strategic areas – water, environmental services, and livelihoods – have been identified through intensive consultations with the member countries, which enabled trans-disciplinary problem analysis, design, and implementation, and monitoring of the programs.

The Asia-Pacific region has a large number **scientific, technical, academic and professional organizations** that have been collaborating with each other through sharing of knowledge, research, fellowship exchange, publications, conferences etc that have significantly contributed to the understanding of the causes and consequences of natural disasters in the regions and the tools and techniques of their remediation. Although much of such collaboration have taken place under government patronage, both the history and range of such collaborations go far beyond the initiatives of national governments and have a momentum and potentiality of its own, which can strengthen the foundation for regional collaboration on DRR and CCA. Many universities in the Asia-Pacific have set up centers on regional studies, which conduct research on a range of issues of regional cooperation and often advise the national and regional organizations on various issues or regional cooperation. In this context a special mention needs to be made of the Graduate School of

Global Environment Studies of the Kyoto University Japan which has involved itself proactively with various initiatives on regional cooperation on DRR and CCA in the Asia-Pacific region.

The **International Federation of Red Cross and Red Crescent Societies** has a strong presence in the Asia-Pacific region. Most of the countries of the region have National Societies with branches in the provinces and districts. The Asia-Pacific Zonal Office of the Federation based in Kuala Lumpur works with the national societies in issuing flash appeal for humanitarian assistance and coordinating relief operations following catastrophic disasters. The regional office further provides guidance and technical assistance to the national societies for conducting disaster preparedness programmes, health and care activities, and the promotion of humanitarian values. It has produced excellent knowledge sharing materials highlighting the experiences and the lessons learned. The Asia-Pacific office has forged a partnership with the Asian Development Bank and the Association of South East Asian Nations in carrying out its operations in the region.

The various regions of the Asia-Pacific have seen prolific growth of local NGOs and civil society organizations that have supplemented the efforts of the government and pushed for greater transparency and accountability in the government driven programs and initiatives. The profile and experiences of some of these organizations have gone beyond the countries of their origin and some of them have presence in a number of countries in the region and even beyond the regions. Coalitions and partnerships of such organizations are emerging as significant stakeholders of regional cooperation on DRR and CCA.

### **3.2.3. United Nations Organizations**

In Asia Pacific, several international organizations have been playing critical role in supporting CCA through the collection and dissemination of data and information. Among all, World Meteorological Organization (WMO) is the specialized United Nations agency for weather, climate, hydrology and water resources and related environmental issues, which has a vast reservoir of expertise, knowledge, data and tools. Through the National Meteorological and Hydrological Services (NMHS), WMO provides authoritative and targeted analyses to the UNFCCC by bringing strong scientific and technical capability along with local, regional and global knowledge. The NMHSs have a long history of recording weather and hydrological observations, which when compiled over a long period of time provide the climatology of specific locations, forming an integral part of the WMO Global Observing System. In addition to the WMO, other organizations that are also in the forefront in collecting, analyzing and disseminating data and information for adaptation to climate change. Key UN organizations working on DRR and CCA are showed below:

1. United Nations International Strategy for Disaster Reduction (UNISDR)
2. United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
3. UNOCHA's Regional Office for Asia and the Pacific
4. World Meteorological Organization (WMO)
5. United Nations Educational, Scientific and Cultural Organization (UNESCO)
6. United Nations Environment Program (UNEP)
7. United Nations Development Program (UNDP)
8. Food and Agriculture Organization of the United Nations (FAO)

9. International Recovery Platform (IRP)
10. ILO Regional Office for Asia and the Pacific

There has been increasing recognition among multilateral and bilateral institutions that DRR and CCA will affect the ability of developing countries in the Asia Pacific to sustain economic growth. Financial and technical assistance have been provided to the countries in order to build capacity to assess their vulnerability to climate change and examine the climatic hazards and adaptations. The international agencies involved include the Global Environment Facility, World Bank, Asia Development Bank, Danish International Development Agency (DANIDA), Australian Agency for International Development (AusAID), JICA, the European Union (EU) and others.

#### **3.2.4. Regional alliances and networks**

There is a number of existing and emerging regional alliances and networks that offer innovative DRR and CCA solutions with the aim to improve adaptive capacity of developing countries and to reduce the impacts of climate change and climate induced disasters. The Asian Cities Climate Change Resilience Network (ACCCRN) and Regional Climate Change Adaptation Knowledge Platform for Asia are emerging networks that seek to mobilise resources of relevant regional centres and ground networks to enhance key scientific, technical and most importantly institutional capacity for adaptation in a synergic and coherent manner. The Asia Pacific Network for Global Change Research (APN) supports assessment of potential vulnerability of natural and human systems with the view of contributing to the development of policy options for appropriate adaptation responses to global change that will also foster sustainable development. There are also academic-driven network that aims to provide innovative adaptation expertise on climate change adaptation and disaster risk reduction. These networks include, among others, the Asian University Network for Environment and Disaster Management (AUEDM) and University Network for Climate and Ecosystems Change Adaptation (UN-CECAR).

There are several existing coalitions that originated from DRR community in the region. The **Asian Disaster Reduction & Response Network (ADRRN)** and Duryog Nivaran have contributed regional activities on DRR and CCA. The ADRRN is a network of 34 national NGOs from 16 countries across the Asia-Pacific region, with its secretariat is based in Kuala Lumpur, Malaysia. The Mission of ADRRN is to promote coordination and collaboration among NGOs and other stakeholders for effective and efficient disaster reduction and response in the Asia-Pacific region and its objectives are to (a) develop an interactive network of NGOs committed to achieving excellence in the field of disaster reduction and response, (b) raise the relevant concerns of NGOs in the Asia-Pacific region to the larger community of NGOs globally, through various international forums and platforms, (c) promote best practices and standards in disaster reduction and response and (d) provide a mechanism for sharing reliable information and facilitating capacity building among network members and other stakeholders. Towards promotion of these objectives, the ADRRN has been making their presence felt in various regional and global conferences, workshops and platforms on humanitarian response and disaster risk reduction.



**Duryog Nivaran**, meaning disaster mitigation, was established in 1995 as a network of individuals and organizations from South Asia, who are committed to promoting the 'alternative perspective' on disasters and vulnerability as a basis for disaster mitigation in the region. The network undertook studies and research related to disaster preparedness and mitigation, regional cooperation, gender and risk and livelihoods and organized several policy discussions and debates on institutionalizing and mainstreaming disaster risk reduction in development in South Asia. The most important of these policy forums was the South Asia Policy Dialogue in New Delhi during August 2006, organized in collaboration with the National Institute of Disaster Management India and Practical Action Sri Lanka, which was attended by the policy makers, scientific and technical organizations, media, and civil society organizations from all the countries of South Asia region. The dialogue ended with the adoption of the Delhi Declaration, which provided a vision and a blueprint for disaster management in South Asia region, particularly for the SAARC Disaster Management Centre which was established in New Delhi soon thereafter. Duryog Nivaran took another pioneering initiative of bringing South Asia Disaster Report. The two editions of this report released in 2006 and 2009 added lot of value to the current understandings of disaster risk and vulnerabilities in South Asia region.

### **3.3. Initial findings from institutional review**

Table 5 shows the UN have the most number of institutions active in Asia Pacific on DRR and CCA. Table 5 also shows that there is an even number of activities regionally by IGOs, regional organizations, UN agencies, and multilateral and bilateral funding institutions, with World Bank GFDRR having the most number of regional activities, followed by ASEAN, ADB and SOPAC. Of these, multilateral and bilateral funding institutions and UN agencies are the ones that have started on activities that address climate impacts focusing more on managing climate risks, as shown in Table 6.

Of the ongoing activities, IGOs and multilateral and bilateral funding institutions have activities that have closer Government ownership, which naturally comes with the nature of these organizations (Table 7). Table 8 shows that there are a lot more activities focusing on HFA priority area 4, the underlying drivers of risks.

**Table 5: Number of regional projects by organization types**

Type of organization		Number of regional projects	Percentage
Regional Inter-Governmental Organizations	APEC	2	5
	ASEAN	19	43
	MRC	5	11
	SAARC	5	11
	SOPAC	13	30
	Total	44	100
Regional Organizations	ADPC	19	56
	CARE	1	3
	ICIMOD	1	3
	IFRC	8	24
	IUCN	2	6
	Kyoto Univ	1	3
	SEI	2	6
	Total	34	100
United Nations Organizations	FAO	5	16
	ILO	1	3
	OCHA	1	3
	UNCRD	2	6
	UNDP	9	29
	UNEP	2	6
	UNESCAP	5	16
	UNESCO	1	3
	UNICEF	1	3
	UNISDR	1	3
	UNOCHA	1	3
	WHO	2	6
Total	31	100	
Regional alliances and networks	ADRRN	2	50
	Duryog Niv	2	50
	Total	4	100
Multilateral and bilateral funding institutions	ADB	17	25
	AusAID	11	16
	EU	11	16
	GFDRR	28	41
	JICA	1	1
	Total	68	100

**Table 6: Regional projects by objectives and organization types**

Type of organization	Objectives	Number of regional projects	Percentage of regional projects
Regional Inter-Governmental Organizations	Addressing the Drivers of Vulnerability	12	27
	Building Capacity on DRR	28	64
	Managing Climate Risk	4	9
	Total	44	100
Regional Organizations	Addressing the Drivers of Vulnerability	2	6
	Building Capacity on DRR	27	79
	Managing Climate Risk	5	15
	Total	34	100
United Nations Organizations	Addressing the Drivers of Vulnerability	3	6
	Building Capacity on DRR	33	69
	Managing Climate Risk	9	19
	Confronting Climate Change	3	6
Total	48	100	
Regional alliances and networks	Building Capacity on DRR	3	75
	Managing Climate Risk	1	25
	Total	4	100
Multilateral and bilateral funding institutions	Addressing the Drivers of Vulnerability	2	4
	Building Capacity on DRR	39	76
	Managing Climate Risk	10	20
	Total	51	100

**Table 7: Regional projects by government guidance and organization types**

Type of organization	Governmental guidance	Number of regional projects	Percentage of regional projects
Regional Inter-Governmental Organizations	Initiated by national governments with support of organization	3	7
	Initiated by organization and adopted by national governments	12	27
	Initiated by the organization	29	66
	Total	44	100
Regional Organizations	Initiated by organization and adopted by national governments	2	6
	Initiated by the organization	32	94
	Total	34	100
United Nations Organizations	Initiated by national governments with support of organization	1	2
	Initiated by organization and adopted by national governments	1	2
	Initiated by the organization	46	96
	Total	48	100
Regional alliances and networks	Initiated by the organization	4	100
Multilateral and bilateral funding institutions	Initiated by organization and adopted by national governments	6	12
	Initiated by the organization	45	88
	Total	51	100

**Table 8: Regional projects by HFA priorities and organization types**

Type of organization	HFA priority	Number of regional projects	Percentage of regional projects
Regional Inter-Governmental Organizations	HFA1	5	11
	HFA2	3	7
	HFA3	9	20
	HFA4	20	45
	HFA5	7	16
	Total	44	100
Regional Organizations	HFA1	3	9
	HFA2	4	12
	HFA3	10	29
	HFA4	8	24
	HFA5	9	26
	Total	34	100
United Nations Organizations	HFA1	10	21
	HFA2	4	8
	HFA3	10	21
	HFA4	20	42
	HFA5	4	8
	Total	48	100
Regional alliances and networks	HFA1	1	25
	HFA3	2	50
	HFA4	1	25
	Total	4	100
Multilateral and bilateral funding institutions	HFA1	14	27
	HFA2	6	12
	HFA3	7	14
	HFA4	11	22
	HFA5	13	25
	Total	51	100

## 4. Regional Enabling Environment Analysis in Asia and Pacific Region

*Due to the historical nature of the institutions in the region, DRR and CCA have evolved separately and only little progress has been made in fostering better cooperation. Newer institutions may be opportunities to foster and lead this integration effort driven largely by high level political guidance.*

### 4.1. Enabling environment typology

The critical role of the enabling environment in achieving more integrated implementation of CCA and DRR is illustrated in Figure 7, using a risk-based approach to adaptation in order to harmonize DRR and CCA as much as is practicable and desirable. This is regardless of whether the initiatives are at community or national level. But at national level, governments in particular have the important responsibility of ensuring a strong enabling environment, as well as benefiting from that enabling environment when undertaking CCA and DRR measures themselves.



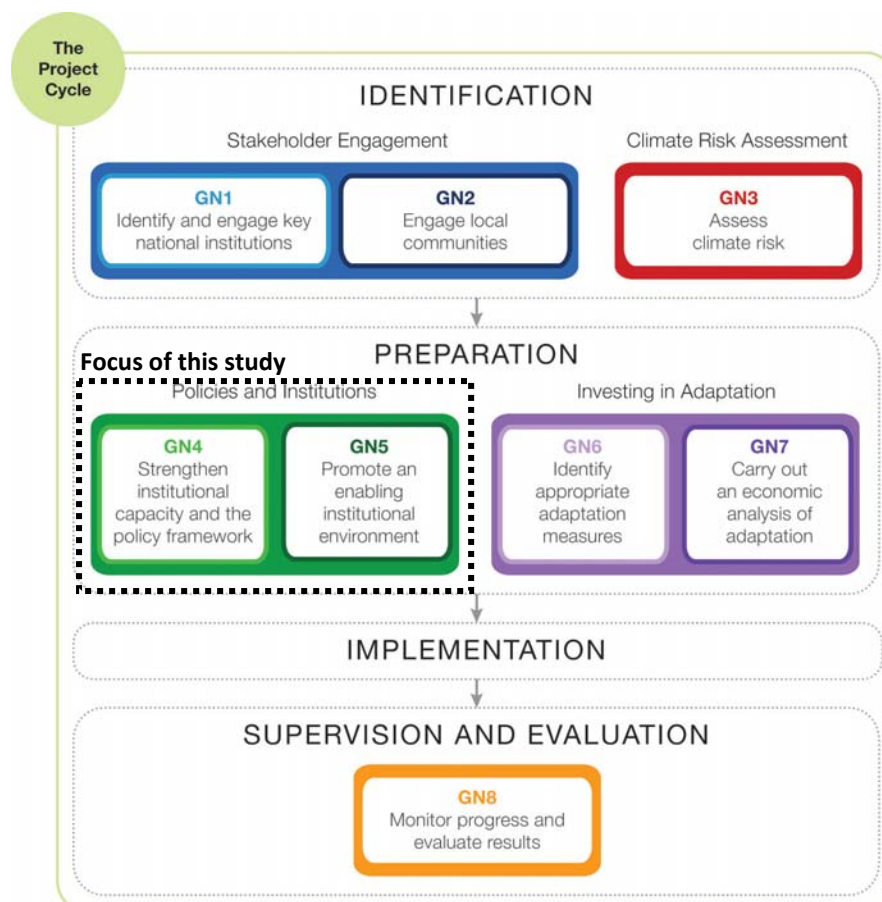
**Figure 7.** Policy framework for CCA and DRR, made possible through a risk-based approach to adaptation. (source: John Hay, 2010)

As indicated in Figure 7, a critical aspect of the enabling environment and a foundation for knowledgeable decision making is to have access to relevant hazard information. Thus national meteorological and hydrological services have an important role to play ensuring access to reliable and long-term natural resource data.

The responsibility of government to ensure a strong enabling environment is of critical importance to communities since this is where most CCA and DRR activities are focused. Communities will see more value in pursuing an integrated approach if it is already reflected

in national and sectoral development policies and plans. Communities will benefit from a more coordinated and harmonized approach that is consistent across all government agencies. Governments can help ensure that communities are equipped with the requisite knowledge and skills required to support decision making and implementation, and have access to proven technologies which are consistent with their needs and values.

In addition, the World Bank’s framework for mainstreaming climate change adaptation in agriculture and natural resources management (Figure 8) starts from project identification, followed by project preparation, implementation, monitoring and evaluation. This study intends to provide some insight into the preparation phase of the framework, in particular the institutions and policy landscape and enabling environment analysis.



**Figure 8.** World Banks Framework for Mainstreaming Climate Change Adaptation into Agriculture and natural Resources Management

Few et al. (2006) have used examples from Mexico, Kenya and Vietnam to provide insights into how a more integrated approach to DRM and CCA can contribute to sustainable poverty reduction and other development outcomes. The main emphasis in the analysis was placed on institutional capacity as well as on constraints and opportunities within the policy process. Thus while the three countries are very different to any of the PICs, the focus on institutions and policies makes their work exceedingly relevant to the current study.

Figure 9 summarizes their findings in terms of commonalities in enabling factors in the implementation of integrated DRM, CCA and poverty reduction. The findings highlight the

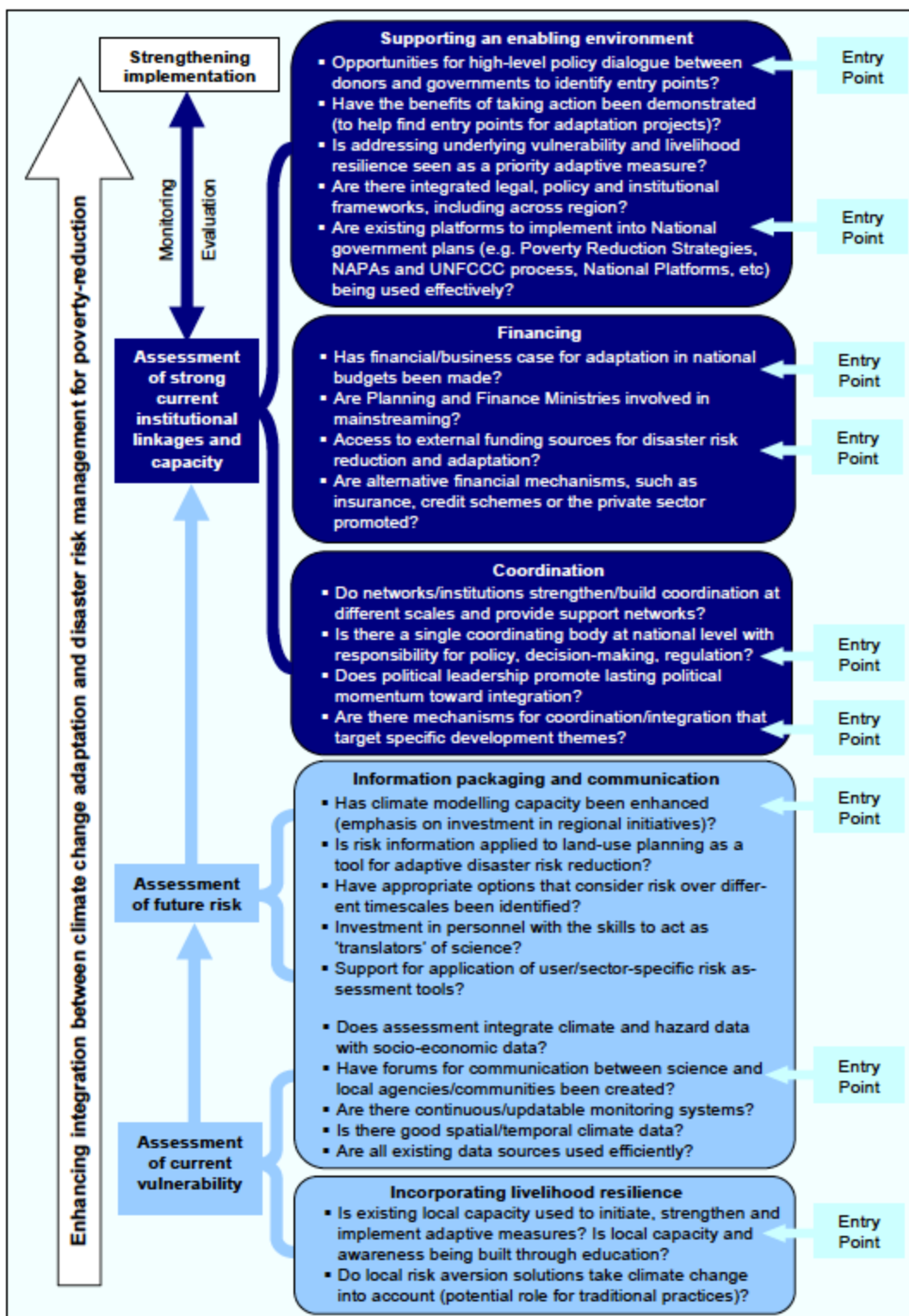
importance of incorporating livelihood resilience, information packaging, communication, coordination, financing and supporting an enabling environment.

Few et al. (2006) also show that a key step in demonstrating through operational work that DRR addressing climate change is possible and beneficial is to find relevant entry points that can showcase how action is feasible and worthwhile, building on current capacity (Figure 9). These entry points can also be used to show how benefits can be linked to current vulnerabilities and to high-level policy goals such as poverty reduction strategy targets and the MDGs.

Environmental and health impact assessments are effective entry points for inter-sectoral cooperation on DRR and CCA. As they are typically high policy priorities, assessments and activities designed to enhance food, water and human security also provide useful entry points as all are sensitive to climate change and are usually important dimensions of natural disasters. Holistic but practical and locally-focussed approaches, such as an ecosystem-based planning, also provide excellent opportunities to promote the integration of DRR and CCA.

Other relevant entry points include:

- Engineering design studies for infrastructure;
- Visioning activities, at community to national level;
- Multi-hazard risk assessments such as development of integrated coastal management plans;
- Local government strategic planning;
- Mid term and final reviews of projects;
- Preparing work programmes of high-level national coordinating institutions;
- Preparation of integrated national policies, legislation or progressive development strategies;
- Development of capacity building strategies, including both top-down and bottom up strategies such as those designed to strengthen community capacity for promoting integration of DRR-CCA into development at the local level; and
- Sourcing funding (internal or external) for projects designed to reduce vulnerabilities and enhance resilience.



**Figure 9.** Commonalities in enabling factors in the integration of DRM, CCA and poverty reduction, and relevant entry points (source: Few et al, 2006).

### Defining A Regional Enabling Environment for DRR and CCA

It is challenging to define the required regional enabling environment for the practical integration of disaster risk reduction and climate change adaptation in Asia and the Pacific.



The World Bank's Mainstreaming Adaptation to Climate Change in Agriculture and Natural Resources Management Projects (Figure 8) provide lessons learned, best practices, recommendations, and useful resources for integrating climate risk management and adaptation to climate change in development projects, with a focus on the agriculture and natural resources management sectors. They are organized around a typical project cycle, starting from project identification, followed by project preparation, implementation, monitoring and evaluation. Each note focuses on specific technical, institutional, economic, or social aspects of adaptation.

Guidance Note 5 of this framework focuses on furthering an enabling institutional environment, which is defined as composed of:

- 1) participatory and community-based natural resource management;
- 2) decentralized natural resource management; and
- 3) institutional coordination.

These indicators were identified because while an enabling institutional environment is crucial in promoting efficient adaptation, the multifaceted nature of adaptation also exacerbates typical institutional challenges for at least three reasons (World Bank, 2009):

- 1) adaptation is largely a context specific and locally driven process, requiring local communities to efficiently manage common resources;
- 2) effective adaptation requires enabling policies and systems at the national level, as well as effective central–local coordinating mechanisms; and
- 3) the multi-sectoral nature of impacts and adaptation to climate change calls for tackling impacts from different angles in a synergistic and coordinated way at various institutional levels.

CARE has also developed the Climate Vulnerability and Capacity Analysis (CVCA) methodology, based on a framework of “enabling factors” for CBA (Dazé et al., 2009). CARE's approach to CCA is grounded in the knowledge that people must be empowered to transform and secure their rights and livelihoods. It also recognizes the critical role that local and national institutions, as well as public policies, play in shaping people's adaptive capacity. By combining local knowledge with scientific data, the process builds people's understanding about climate risks and adaptation strategies. It provides a framework for dialogue within communities, as well as between communities and other stakeholders. The results provide a solid foundation for the identification of practical strategies to facilitate community-based adaptation to climate change.

Mindful of the regional context of this review, and building on these descriptions of an enabling environment, where relevant, the following indicators have been adopted to describe the regional enabling environment for fostering DRR and CCA integration:

1. the political commitment and awareness of regional inter governmental organization and
2. the regional policy and institutional mechanisms related to DRR and CCA.

## **4.2. Political Commitment and Awareness of Regional Inter Governmental Organization**

### **4.2.1. Central Asia**

The Central Asia, comprising mainly of the five erstwhile Asiatic States of the USSR - Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan - is yet to find a solid regional mechanism for disaster risk reduction. Diverse political, security and economic interests encouraged these States to look towards the north in Commonwealth of Independent States (CIS), east in Shanghai Cooperation Organization (SCO) and South in Economic Cooperation Organization (ECO) for cooperation, but none of these organizations, barring the ECO to some extent, has any significant program or agenda on disaster management. Established in 1985 by Iran, Pakistan and Turkey, the ECO currently includes all the five central Asian States besides Afghanistan and Azerbaijan. ECO has made significant gains in the fields of economic, technical and cultural cooperation among the Member States, but disaster management is not yet in the active agenda of the organization even though the leaders have been emphasizing the need for such cooperation. The 9th Summit of ECO leaders held in Baku in May 2006 called for regional programs for early warning, and practical steps for disaster preparedness. Since 2006 ECO has been organizing annual International Conferences on Disaster Risk Management which provided a platform for the scientists and practitioners to come together to discuss the issues of common interests and importance.

The Government of the Islamic Republic of Iran set up a Regional Centre for Risk Management of Natural Disasters in Mashhad, Iran in 2007 with the mandate to develop early warning mechanisms, monitor natural disasters, weather and environmental conditions and help member states in capacity building. The Centre received the status of an ad hoc body affiliated to the ECO, but it is yet to report any significant progress towards achieving the stated objectives, particularly for the Central Asian region.

#### **4.2.2. North East Asia**

The North East Asia is marked by the presence of the three towering economies of the world - China, Japan and South Korea - which together account for nearly 60% of the total wealth of the Asia-Pacific. Japan and South Korea in particular have made significant progress in disaster risk reduction, which is reflected in the fact that the recurrent hazards of nature no longer create huge disasters for the people and the economies of the two countries. China has proactively reduced the risks of recurrent flood and drought and is seriously engaged with the task of making the country safe from earthquakes and landslides. The principles and practices followed by Japan have set global standards of disaster risk reduction.

Regarding climate change adaptation, policies of China for adaptation to climate change are still at the initial stage, and a systematic strategy for adaptation to climate change has not yet taken form. However, some policies and measures that have been adopted have played a positive role in the adaptation to climate change. China will, in its own capacity, continue to adopt policies and measures in favor of the adaptation to climate change. Taking threats by climate change as an opportunity for the new growth initiatives, Korea promotes and fosters "Green Industries" as new growth power through low-carbon green growth. Korea operates Climate Change Task Force under the Office of the Prime Minister and establish comprehensive basic plans and countermeasures basic Act. In Japan, the Cabinet Office's Council for Science and Technology Policy established a task force in March 2009 to plan the

direction of technological development aimed at realizing a society adaptive to climate change.

In East Asia, each country has a significant commitment and well aware of the disaster risk reduction and climate change adaptation. However, there is no intergovernmental organization in the region to take lead in DRR and CCA issues.

#### **4.2.3. Pacific**

The Pacific Islands Applied Geoscience Commission (SOPAC) is the main vehicle for the promotion of regional cooperation on disaster risk reduction and management in the Pacific region. The SOPAC was established in 1972 under the Economic and Social Division of the UN as a project called the Committee for Coordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas (CCOP/SOPAC). It became an autonomous intergovernmental organization in 1984 with the signing of an agreement, initially among the 12 island countries, Australia and New Zealand, which was subsequently expanded to 7 other island countries. The focus of its work was also broadened from marine mapping and geosciences to include hazard assessment and risk management for sustainable development.

The Pacific Regional Environment Program (SPREP) is an intergovernmental organization comprising 25 States and Territories. It has the responsibility to build capacity within member States to manage their own environment. SPREP is the secretariat for regional environmental conventions and their protocols. These MEAs strengthen the regional legal frameworks for implementing global conventions.

To support SPREP Members, the Secretariat promotes coordination at the national level, provides technical and legal advice to States (for example in drafting national legislation), assists in preparing briefing papers for international negotiating conferences, coordinates pre-conference consultations to determine regional positions, and strengthens regional legal frameworks. SPREP builds capacity of Pacific Island States to develop, implement, and enforce MEAs in many ways. It conducts research, offers training courses, and develops materials. SPREP also promotes the placement of staff from other secretariats of Conventions and NGOs at its Headquarters.

SPREP's regional workshops promote implementation of MEAs in various ways. They build awareness and interest of Member States in MEAs. Workshops help to develop regional positions prior to COPs, particularly on issues of direct relevance to the region. SPREP also holds training workshops on specific aspects relating to implementation of MEAs. SPREP also advises Pacific delegates during COPs and other negotiations of global MEAs.

Until recently there has been a substantial and counterproductive disconnect between SOPAC and SPREP in relation to assisting countries address their climate-related risks by implementing DRR and CCA. The two frameworks, and the associated differences in the mandates of these two regional intergovernmental organizations, mean that major opportunities to reduce risks and build resilience on the ground in the Pacific have been missed. The Pacific Plan has done little to help bridge the gap, and neither did the recent Regional Institutional Framework processes. Fortunately, new leadership at both SPREP and

SOPAC is now providing a favorable environment for increased coordination and cooperation between the two agencies, especially with respect to DRR and CCA.

#### **4.2.4. South Asia**

The regional cooperation on disaster management among the countries of the region started on 8 December 1985 when the Heads of State or Government of the seven countries of the region, namely Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka adopted the Charter of the South Asian Association for Regional Cooperation (SAARC). Afghanistan joined the SAARC in 2007. Although the Charter does not make any specific mention of disaster management, it is broadly covered under its generic objectives to (a) promote the welfare of the peoples and to improve their quality of life, (b) accelerate economic growth, social progress and cultural development of the region and to (c) promote active collaboration and mutual assistance among the countries of the region. The Charter provides for a hierarchy of decision-making structure with an annual Summit meeting of Heads of States or Governments, bi-annual meetings of Foreign Ministers, quarterly meeting of the Standing Committee of Foreign Secretaries, and the Technical Committees of experts and subject matter specialists on specific fields as may be constituted. The Charter specifically provides that every decision at all levels shall be taken on the basis of unanimity. This provision has been designed to secure the sovereign equality of all the member States, particularly in the context of asymmetric power structures in the region.

Disaster management figured for the first time in the SAARC when the Third SAARC Summit in Kathmandu in 1987, deeply concerned at the fast and continuing degradation of the environment leading to natural disasters decided to commission a *Study for the Protection and Preservation of the Environment and the Causes and Consequences of Natural Disasters*. Accordingly, a Group of Experts with members from all the SAARC Countries was constituted to prepare the Study. The study report finalized in 1991, recommended various measures for the protection and management of the environment, strengthening of the disaster management capabilities of the state and non-state actors and suggested mechanisms for the implementation of the recommendations of the study. The recommendations were endorsed by Heads of State or Government at their Sixth Summit (Colombo 1991) and as follow up measures the SAARC Meteorological Research Centre were established in Dhaka in 1995 and a SAARC Coastal Zone Management Centre came up in Male in 2004.

#### **4.2.5. South East Asia**

Association of South East Asian Nations (ASEAN) was set up in August 1967, which makes it the oldest regional organization of the Asia-Pacific, the ASEAN started with four countries – Indonesia, Malaysia, Philippines, Singapore and Thailand – and gradually expanded its membership to ten with the inclusions of Brunei in 1984, Viet Nam in 1995, Lao and Myanmar in 1997 and Cambodia in 1999. The ASEAN grew through the phase of declarations (Bangkok 1967, Kuala Lumpur 1976), concords (Bali 1976, 2003), Treaty of Amity and Cooperation (1976), Vision 2020 (Kuala Lumpur 1997), Plan of Action (Hanoi 1998), culminating with the adoption of the Charter of the ASEAN in November 2007, on the occasion of its fortieth anniversary.

The Declaration of the ASEAN Concord I identified disaster management as one of the eight principles and objectives for ASEAN cooperation. The ASEAN Declaration on Mutual Assistance on Natural Disasters of 1976 recognized the serious consequences of natural disasters on the economic and social development of countries of the region and called for mutual assistance in mitigation, rescue and relief of victims of natural disasters. The experience gained in the implementation of Regional Haze Action Plan 1998 was institutionalized with the signing of the ASEAN Agreement on Trans-boundary Haze Pollution in June 2002. The importance of disaster management was further emphasized in the Declaration of Concord II, which resolved to establish an ASEAN Community by 2020 based on three pillars, namely political and security community, economic community, and socio-cultural community that are closely intertwined and mutually reinforcing for the purpose of ensuring durable peace, stability, and shared prosperity in the region.

For over three decades, ASEAN's disaster reduction efforts were coordinated by the ASEAN Experts Group on Disaster Management (AEGDM), which was one of the seven subsidiary bodies under the ASEAN Committee on Social Development. The Expert Group was elevated as the ASEAN Committee on Disaster Management (ACDM) in 2003. The ACDM consists of heads of national agencies responsible for disaster management in the ASEAN Member Countries and has the overall responsibility for coordinating and implementing the regional activities on disaster management.

The 1990's were the international decade for disaster risk reduction. ASEAN governments recognized the importance of disaster risk reduction and climate change adaptation and their role in development. Each country and indeed sub-region varies according to its needs and progress in attaining a paradigm shift from response and preparedness towards disaster risk management and reduction. All countries having ratified the HFA recognize and have committed to the importance of partnership in risk reduction.

#### **4.2.6. West Asia**

Prolonged conflicts in the region have not encouraged the creation of a single regional organization that binds all the countries of the region together. The countries of the region have looked towards organizations beyond their neighborhood for finding solutions to the regional problems of disaster risk management and climate change. Two such organizations that have made some headway in this direction are the League of the Arab States and the Gulf Cooperation Council. The Arab League, which was set up in Cairo in 1945 'to draw closer the relations among the member States' has 22 member States of which 12 are from the West Asia. The League does not yet have any proposal to set up any specialized regional agency for addressing the issues of disaster risk reduction and climate change adaptation.

### **4.3. Regional Policy and Institutional Mechanisms Related to DRR and CCA**

#### **4.3.1. Central Asia**

The five core Central Asian States have been striving for developing mechanisms for strengthening cooperation among themselves. They had entered into a Treaty of Eternal Friendship in January 1997 and guided by the goals and principles of this treaty, they signed in July 1998 a Cooperation Agreement for Prevention and Liquidation of Emergencies, which

would include 'a range of activities carried out well in advance aimed at reducing to the maximum possible extent the risk of an emergency as well as at preserving human health, reducing extent of environmental damage and material losses in case an emergency occurs'. However such cooperation did not significantly extend to reducing the risks of natural disasters.

The three Central Asian States of Kyrgyzstan, Tajikistan and Uzbekistan met in Osh in Kyrgyzstan in March 2008 and again in June 2009 to reach common understanding and cooperation on the following:

- Establishment of early warning systems.
- Elaboration and/or revision of inter-state agreements between the Customs Office, Ministries of Internal Affairs, and border-security forces;
- Training of professional search and rescue teams;
- Exchange of information, including hydro-meteorological data;
- Establishment of a working group for disaster risk management for Ferghana Valley.

Meanwhile efforts are under way for developing a full-scale regional cooperation among all the five central Asian States. Meeting with the representatives of all the five States had taken place on the sidelines of the Asian Ministerial Conferences in Delhi in 2007 and Kuala Lumpur in 2008 and more recently in the regional meetings in Almaty and Geneva in 2009. Broad agreements on the legal and institutional arrangements, principles and objectives and a framework of activities on the first eighteen months have been reached and it is expected that the much awaited Central Asian Centre for Disaster Response and Risk Reduction would be set up in 2010.

#### **4.3.2. North East Asia**

The North East Asia region as a whole has not been able to develop even a rudimentary general or specialized organization for regional cooperation on disaster management. However efforts have been made in the recent past to develop sub-regional cooperation at least among the three countries of China, Japan and South Korea. The First Japan-China-Korea Trilateral Summit held in Kukupa in December 2008 agreed to hold tri-lateral heads of government agency and expert level meetings on rotation. Following the expert level meeting in Seoul in 2009 and Ministerial level meeting in Kobe in October 2009 a Tri-lateral Joint Statement on Disaster Management Cooperation was adopted, which identified three broad areas of cooperation among the three countries of the region, namely (a) countermeasures to the disasters which are expected to increase due to climate change, (b) promoting earthquake-proofing of buildings and (c) utilizing satellite technologies for disaster management. The next meeting will be held in China in 2011.

#### **4.3.3. Pacific**

The Pacific Islands Framework for Action on Climate Change (2006-2015) (PIFACC) was endorsed by Pacific leaders at the 36th Pacific Islands Forum held in 2005. They recognized the importance of Pacific island countries and territories taking action to address climate change through their national development strategies, which are linked to national budgetary and planning processes. The Framework builds on The Pacific Islands Framework

for Action on Climate Change, Climate Variability and Sea Level Rise 2000-2004. The 2006-2015 timeframe of the Framework is consistent with the timeframes of the Millennium Declaration, the Johannesburg Plan of Implementation and the subsequent work of the UN Commission on Sustainable Development.

In 2005 a Pacific Islands Climate Change Roundtable (PCCR) meeting was convened to review the Framework. One outcome was a proposal to develop an action plan for implementation of the Framework. The Action Plan for the Implementation of the Framework for Action on Climate Change was subsequently prepared. In the Plan, regional programming complements national activities. The Plan also provides an indicative menu of options for action on climate change. In order to ensure appropriate coordination of activities under the Framework, the PCCR was reconstituted in 2008, with SPREP being called upon to convene regular meetings of the PCCR inclusive of all regional and international organizations and civil society organizations with active programmes on climate change in the Pacific region. This was a timely and appropriate development. It went some way to addressing the identified need for improved donor coordination and harmonization of efforts. Development Partners for Climate Change (DPCC), comprising governmental and related agencies located in Suva, meet regularly to facilitate coordination of development partner activities in the Pacific related to climate change.

The Pacific Regional DRM Framework reflects the increased national and regional commitment to DRR and disaster management on an 'all hazards' basis and in support of sustainable development. These commitments derive from the Pacific Forum Leaders decision in Madang 1995 and the Auckland Declaration in 2004. The Framework contributes to the implementation of the Mauritius Strategy and the global Hyogo Framework.

There is significant complementarity and congruence between the two regional frameworks. Many of the key players (e.g. donors, NGOs, regional organizations) are involved in implementing both DRM and CCA. The two frameworks have common linkages with the Pacific Plan for Strengthening Regional Cooperation and Integration. On the other hand, at the level of implementation there is considerable separation. This has its origins at the highest levels. The Hyogo Framework, which has been endorsed by 168 governments, is promoted especially by the ISDR system of partners. The objectives and work programs of many DRM initiatives in the Pacific are strongly guided by the Hyogo Framework and the Pacific Regional DRM Framework, as are the supporting institutional structures. A similar situation exists for climate change initiatives in the Pacific, with these being influenced by UNFCCC processes and funding (through the GEF) and to a lesser extent by the PIFACC. All PICs are Parties to the UNFCCC.

#### **4.3.4. South Asia**

On the aftermath of Indian Ocean Tsunami of December 2004, a Special Session of the SAARC Environment Ministers was held at Male on 25 June 2005. The Ministers had concluded the meeting by adopting the Male Declaration, which decided inter alia that an Expert Group of the member countries shall meet at Dhaka, Bangladesh to formulate a Comprehensive Framework on Early Warning, Disaster Management and Disaster Prevention, prior to the Seventh Ministerial Meeting on Environment in Bangladesh.

The Expert Group met on 7-9 February 2006 in Dhaka and developed a comprehensive framework on disaster management in South Asia. The framework is aligned with the implementation of the Hyogo Framework of Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters. The SAARC Council of Ministers approved the Framework on 30 July 2006 and by the Fourteenth SAARC Summit in New Delhi in 3-4 April 2007.

The Framework provides a platform for South Asian countries to:

- Establish and strengthen the regional disaster management system to reduce risks and to improve response and recovery management at all levels
- Identify and elaborate country and regional priorities for action
- Share best practices and lessons learnt from disaster risk reduction efforts at national levels
- Establish a regional system to develop and implement regional programmes and projects for early warning
- Establish a regional system of exchanging information on prevention, preparedness and management of natural disasters
- Create a regional response mechanism dedicated to disaster preparedness, emergency relief and rehabilitation to ensure immediate response
- Create a regional mechanism to facilitate monitoring and evaluation of achievements towards goals and strategies

The Fourteenth SAARC Summit held in New Delhi in 2007 expressed 'deep concern' over the global climate change and called for pursuing a climate resilient development in South Asia. The member countries pledged for immediate collective action and stronger regional co-operation for the conservation and utilization of SAARC shared resources towards addressing the negatives of climate change. Further, the SAARC Council of Ministers, at their Twenty ninth Session held in New Delhi in December 2007, adopted the SAARC Declaration on Climate Change which reflects the collective vision of South Asia.

The SAARC Ministerial Meeting on Climate Change held on July 3, 2008 in Dhaka adopted the SAARC Action Plan on Climate Change. H.E. Dr Sheel Kant Sharma, the SAARC Secretary General, in his inaugural speech laid emphasis on intensifying the regional cooperation on climate change adaptation. He also highlighted that the emphasis of SAARC is to move from a declaratory to implementation phase and highlighted the roles that SAARC Regional Centers could play therein. He called upon the SAARC Meteorological Research Centre, the SAARC Coastal Zone Management Centre, SAARC Disaster Management Centre and SAARC Forestry Centre to contribute synergistically with their respective mandates in enhancing the SAARC climate change resilience by pursuing SAARC Action Plan on Climate Change.

The 15th Summit Meeting of Heads of States or Governments of SAARC countries held in Colombo on 2-3 August, 2008 has endorsed the SAARC Action Plan and Declaration on Climate Change adopted by the Environment Ministers at Dhaka on 3rd July, 2008.

The SAARC Action Plan on Climate Change stresses that the primary responsibility of implementing the Action Plan, proposed for an initial period of three years, rests with the National Governments. With regard to the regional cooperation, the Action Plan envisages



that a mechanism should be agreed upon to effectively use the existing institutional arrangements of SAARC by giving clear directions and guidance.

In April 2010, Leaders at the 16th SAARC Summit, expressing deep concern over dual challenge of addressing the negative impacts of climate change and pursuing socio-economic development, called for the commissioning of a SAARC Inter-governmental Climate-related Disasters Initiative, on the integration of Climate Change Adaptation with Disaster Risk Reduction. (SAARC 2010)

#### SAARC Disaster Management Centre

Considering the regional dimensions of natural disasters the 3rd SAARC Summit had commissioned a comprehensive Regional Study on the Causes and Consequences of Natural Disasters. A SAARC Meteorological Research Centre was established in Dhaka in 1995 and a SAARC Coastal Zone Management Centre was set up at Male in 2004. The 13th SAARC Summit at Dhaka in November 2005 considered the issues of regional cooperation for preparedness and mitigation of national disasters and approved the offer of India to set up SAARC Disaster Management Centre Management in New Delhi.

The Centre is functional since October 2006 with the mandates from SAARC summits. Recently, the 15<sup>th</sup> SAARC Summit in August 2008 at Colombo entrusted to the SAARC Disaster Management Centre to develop a Natural Disaster Rapid Response Mechanism (NDRRM) for coordinated and planned approach to meet emergencies and recommended that the Charter of the SAARC Disaster Management Centre shall be modified to incorporate its role in Natural Disaster Response.

#### **4.3.5. South East Asia**

Member States signed the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) on 26 July 2005. The Agreement came into force on 24 December 2009 after being ratified by all the ten Member States of the ASEAN. It is the first and the only HFA-related binding instrument in the world and is a unique contribution of the ASEAN to the global disaster risk reduction aims.

The AADMER has in all 36 Articles, divided in 11 Parts that deal in a comprehensive manner the whole cycle of disaster management starting with risk identification, assessment and monitoring, and continuing with disaster prevention and mitigation, disaster preparedness, emergency response, rehabilitation, technical cooperation and scientific research and institutional arrangements and procedures. The Agreement provides that the ASEAN Coordinating Centre for Humanitarian Assistance (AHA Centre) shall be established for the purpose of facilitating co-operation and co-ordination among the Parties, and with relevant United Nations and international organizations, in promoting regional collaboration. As a first step for the implementation of the Agreement Dr. Surin Pitsuwan Secretary General of the ASEAN was appointed as ASEAN's Humanitarian Assistance Coordinator.

Each of the strategic components has a number of sub-components with clearly defined objectives and expected outputs. The activities to be taken up for achieving the outputs, the responsible parties for implementation, the shepherd country to lead the process, the

timeline and the milestones are clearly defined in the work program. The program is intended to be a dynamic rolling plan that will be updated and revised through a continuous system of feedback, monitoring and evaluation. The program shall be implemented in two phases, each covering a period of three years. The program received the approval of ACDM on 11 March 2010 and was formally launched in May 2010.

Comparison between the two work programmes - ARPDM and AADMER- demonstrates in no uncertain terms the growing maturity and confidence of the ASEAN system. While the first regional program took almost six years to be developed with technical support of the ADPC and financial support of the ECHO, consensus on the second program could be reached much faster within a year without much assistance from an outside agency. The time and efforts invested on developing the process of regional cooperation during the first programme did not go in vain. The capacities, needs, strength and constraints of the system and its stakeholders became well established during the first program which facilitated consensus on where the focus should be in the second program. The output-activity matrix of each component of the second program and the responsibilities vested with Working Groups of the Member States for the specific programs with the role of a Lead Shepherd for each activity, as envisaged in AADMER Work Program, promises a dynamic and participatory system for implementation and monitoring of the program.

Another distinguishing feature of the ASEAN system has been a very open, transparent and proactive engagement of various international organizations and multilateral institutions at every stage of the planning and implementation of the program. The bureaucratic and time consuming process of approval at every stage has been eliminated through common understanding on the basic framework and greater delegation of powers and authorities of the ASEAN Secretariat within the framework, which is missing in many other regional systems.

AADMER provides for creation of an ASEAN Coordinating Centre for Humanitarian Assistance (AHA Centre) 'for the purpose of facilitating co-operation and co-ordination among the Member States and with relevant United Nations and international organisations, in promoting regional collaboration'. The Terms of Reference of the Centre as provided in the annex to the Agreement curves out a role of the Centre, which is much beyond humanitarian assistance. The recent decision of the ASEAN Summit to appoint Secretary General of the ASEAN as the ASEAN Humanitarian Assistance Coordinator is suggestive of the importance that would be attached to the Centre in the ASEAN system. The organisational structure of AHA Centre, as proposed in the ARPDM-II, entails creation of four Divisions: (a) Preparedness, Response and Recovery, (b) Risk Assessment, Early Warning & Monitoring and Knowledge Management, (c) Prevention and Mitigation, and (d) Partnership and Resource Mobilization, working under an Executive Director with the oversight of a Governing Board and an Advisory Group. It may be expected that the emerging institutional mechanism would further strengthen the ASEAN system of disaster management.

Complementing disaster management efforts in ASEAN, the ASEAN Regional Forum (ARF), which draws together 27 countries that have a bearing on the security of the Asia-Pacific region, including the 10 ASEAN member states (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam), the 10 ASEAN dialogue

partners (Australia, Canada, China, the European Union, India, Japan, New Zealand, Republic of Korea, Russia and the United States), one ASEAN observer (Papua New Guinea), as well as the Democratic People's Republic of Korea, Mongolia, Pakistan, Timor-Leste, Bangladesh and Sri Lanka. Established in 1994, the objectives of the ARF are to foster constructive dialogue and consultation on political and security issues of common interest and concern; and make significant contributions to efforts towards confidence building and preventive diplomacy in the Asia-Pacific region. Disaster management was identified as an important aspect of comprehensive security, and a valuable confidence building measure for the ARF as well. Considering the role that ARF might have to play in disaster response and relief, an exercise on ARF Voluntary Demonstration of Response (VDR) was conducted in the Philippines from 4 to 8 May 2009 as a civilian-led, military supported exercise designed to demonstrate ARF national capabilities in response to an affected country's request for assistance, and build regional assistance capacity for major, multinational relief operations.

Regional cooperation in disaster reduction in South East Asia has been strengthened by sub-regional cooperation in specific areas. The greatest example of such cooperation has been the Mekong River Commission (MRC), which was formed on 5 April 1995 by an agreement between the governments of Cambodia, Lao PDR, Thailand and Viet Nam. The four countries signed the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin and agreed on joint management of their shared water resources and development of the economic potential of the river, which significantly reduced the risks of flood in the region. The MRC supports the Mekong Program, which is a regional cooperation program for the sustainable development of water and related resources in the Mekong basin owned by its member countries.

ASEAN, UNISDR and the World Bank share a common goal of promoting disaster resilient nations and safer communities. In 2009, these key actors signed a Memorandum of Cooperation to strengthen their partnership to mainstream disaster risk reduction in the development processes of ASEAN member states. The guiding principles of this cooperation are inspired by the ASEAN charter; Blue print of the ASEAN Socio-cultural Community, 2008-2015; ASEAN agreement on disaster management and response (AADMER), 2009; the Hyogo Framework for Action (HFA), 2005-2015; ASEAN program on disaster management ARPD, 2004-2010 and declarations of Asian Ministerial Conferences on Disaster risk reduction.

This collaboration has multiple objectives – all aiming toward helping ASEAN reduce disaster risks and protect its citizens from hardship as well as damages caused by natural disasters. These include the development of legislation, policies and action plans; mobilize resources, and capacity building of both the ASEAN Secretariat and member states on DRR and climate change adaptation.

Recognizing that the region is highly vulnerable to the adverse impacts of climate change, the ASEAN countries have launched an ASEAN Climate Change Initiative (ACCI). ACCI is envisaged to be a consultative platform to strengthen regional coordination and cooperation in addressing climate change, and to undertake concrete actions to respond to its adverse impacts. This Initiative will strengthen the region's capacity both in mitigation and adaptation efforts, and in particular to bring forward the region's interests and priorities onto international negotiations on future climate regime as appropriate.

One of the stated objectives of the AADMER Work Program is to build partnership between Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) Institutions and Programs. These are expected to be achieved through

- (b) Improved coherence and coordination in the planning and implementation of DRR and CCA programs at the regional, national and sub-national levels;
- (c) Active participation of both DRR and CCA agencies in common and relevant regional and national activities and initiatives;
- (d) Establishment of new regional and national partnerships and mechanisms between DRR and CCA bodies; and
- (e) Increased visibility and understanding of the scientific and practical links between DRR and CCA goals and initiatives in the region and Member States.

In order to achieve these objectives it is proposed to organize regional workshop between ACDM and other relevant ASEAN bodies (such as environment, science and technology, agriculture, energy) to forge stronger linkages between DRR and CCA initiatives in Member States to enhance their internal capacities, resources, efficiency and effectiveness towards achieving shared goals. It is further proposed to develop scientific studies and research on technical and practical impacts due to climate change for sectors vulnerable to disaster risk.

#### **4.3.6. West Asia**

The Regional Workshop on Disaster Reduction and Sustainable Development held in Riyadh in May 2009 felt the need for development of an Arab strategy for disaster risk reduction that reflects the regional vision and priorities and an executive program that includes technical and financial mechanisms to support the implementation of the strategy at national and regional levels. The Islamic Development Bank in Jeddah offered to support development of national capacities for the implementation of the Hyogo Framework of Action to reduce disaster risks. The Arab Academy for Science and Technology and Maritime Transport in Alexandria agreed to explore the possibility of developing regional capacity for disaster risk reduction through training and other programs.

In a parallel initiative the Foreign Affairs Ministers of the Gulf Cooperation Council proposed to establish a GCC Disaster Centre (GCC-DC) and appointed a Technical Committee to draft a proposal for setting up the Centre. The Technical Committee is visiting various regional and national initiatives across the globe for finalizing its recommendations. It is envisioned that the GCC-DC will be under the Executive Management of a Board of Governors that is comprised of the Ministers of Foreign Affairs in the GCC States. A Steering Board made up of one representative from each GCC Member State will provide oversight of the Centre's policies, strategies, and work program. As currently conceived, the Centre will focus on all potential risks that the region faces including the natural and technological threats. Considering the emerging threats of the region and the economic potential the region has for making investments on risk reduction it can be expected that the GCC-DC would emerge as a strong and vibrant centre for disaster risk reduction in the region.

#### **4.4. Initial findings from analysis**

Because of historical reasons, many of the institutions have evolved separate units or bodies dealing with DRR and CCA, and only a few have developed coordination mechanisms that

will allow and promote joint or coordinated programming or activities. Although the commitment and awareness of these institutions on their respective areas of work seem to be high, the awareness and commitment across DRR and CCA teams within organizations is an area that still needs work. At present the nature of the activities seem to focus a lot more from a DRR perspective and on building capacity. An integrated approach at this level will allow not only to prepare for the necessary steps towards activities that focus on the impacts of climate change, but also to ensure that ongoing activities do not create new risks, or foster mal-development.

Younger institutions seem to be opportunities to foster better cooperation and integration in the region. Driven by strong political calls for cooperation, these institutions like IGOs can probably initiate better cooperation starting at coordinated programming.

## 5. Draft Conclusions

The Asia-Pacific region is the most vulnerable to natural disasters. The region has also demonstrated its resolve to reduce the risks of climate change and disaster through various initiatives taken regional levels. Some regions of the Asia-Pacific have made significant progress in developing regional programs and action plan for DRR and CCA, while other regions are still looking for viable models that would work in the prevailing political, security and economic situations of the regions. International organizations and multilateral funding institutions have been proactively engaged in supporting and enhancing regional programs and activities on DRR and CCA while various regional non-governmental stakeholders are also supplementing the efforts of national and international agencies for implementing DRR and CCA. The result has been seamless activities of multiple agencies in multi-dimensional programs and initiatives as never seen before. This has created the necessary climate for more concerted action for planning, mobilizing resources and implementation. This has also highlighted the need for greater coordination and synergy of efforts for optimum utilization of scarce resources for maximum gains. There are huge scope and opportunities for sharing and cross learning of experiences across regions both within and outside the Asia-Pacific. The coming years would witness heightened activities for implementation of the regional plans and programs for DRR and CCA, more support from the international agencies for such initiatives and more intra as well as inter-regional cooperation for marching together with the shared vision of making the Asia-Pacific safer from the risks of disasters caused by natural hazards and climate change.

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