

## 1.0 Cambodia

ACIAR Australian Centre for International Agricultural Research

ADPC Asian Disaster Preparedness Center

AIT Asian Institute of Technology

AusAID Australian Agency for International Development

CIA Central Intelligence Agency

CSIRO Commonwealth Scientific and Industrial Research Organisation

DANIDA Danish International Development Agency

FAO Food and Agriculture Organization of the United Nations

GEF Global Environment Facility

GMSARN Greater Mekong Subregion Academic and Research Network
GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit
ICEM International Centre for Environmental Management

IDRC International Development Research Centre
IUCN International Union for Conservation of Nature

IWMI International Water Management Institute

JID Japanese Institute of Irrigation and Drainage

LDC least developed country

LDCF Least Developed Countries Fund

Lux-Development Luxembourg Agency for Development Cooperation

MOE Ministry of Environment MRC Mekong River Commission

NAPA National Adaptation Programme of Action

NOAA National Oceanic and Atmospheric Administration (United States)

NSDP National Strategic Development Plan SEI Stockholm Environment Institute

SENSA Swedish Environmental Secretariat for Asia

SNC Second National Communication

START Global Change SysTem for Analysis, Research and Training



SIDA Swedish International Development Cooperation Agency

UNDP United Nations Development Programme
UNEP United Nations Environment Programme

UNFCCC United Nations Framework Convention on Climate Change

UNU United Nations University

USAID United States Agency for International Development

USDS United States Department of State

WHO World Health Organisation

WWF World Wildlife Fund / Worldwide Fund for Nature

Cambodia occupies 181,035 square kilometers and has a population of 14.7 million people (CIA, 2011). The country is classified as being among the least developed in the world, with a human development ranking of 124 out of 169—the second lowest in the region (UNDP, 2010). Despite these challenges, the country's economy has grown considerably over the past several years, with manufacturing, tourism and agriculture representing major economic sectors (USDS, 2010). As one of the least developed countries (LDCs) in the region, Cambodia faces particularly acute challenges related to climate change including a need to build domestic capacity to address challenges related to health, agriculture and water resources.

## A. Adaptation Needs and Priorities

Cambodia Submitted a National Adaptation Programme of Action (NAPA) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2007 (MOE, 2006). Its NAPA outlines Cambodia's main areas of concerns related to water management and agriculture, as well as the development challenges that compound the country's vulnerability to climate change. Cambodia reports an increasing severity of floods and droughts, which has led to crop failures and contributes substantially to poverty levels (MOE, 2006). In its NAPA, Cambodia specifically identified some of the primary needs and threats that it faces with respect to adaptation, as well as priority sectors targeted for action, including agriculture, water resources, coastal zones and human health. It also notes the need for flood protection enhancement through initiatives like riverbank improvements, particularly in areas of the Mekong watershed; and for food security protection to address floods and adverse weather events.

Through its Initial National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) Cambodia identified adaptation needs in the priority sectors of agriculture, and forestry. With respect to agriculture, adaptation suggestions in the



National Communication include: development of new high-yield crop varieties, improved crop management, warning systems for extreme weather events, and improvement of irrigation. Within the forestry sector, Cambodia suggests the creation of forest plantations on otherwise unproductive lands, conservation of protected areas, and improved forest resource management. The National Communication also discusses adaptation priorities within the area of human health, including education and disease control measures, as well as in coastal zones, including the development of a strategic response to sea level rise including studies of impacts, improved management and capacity building of local residents (MOE, 2002).

In addition there has been considerable research on the relationship between climate change and fisheries in Cambodia. Fisheries are a critical component of rural livelihoods and makes up as much as 80 per cent of the animal protein in a traditional diet. Hydrological variation in the Mekong Basin induced by climate change is predicted to amplify the emerging boom and bust cycle of fish catches, resulting in less stability for rural people. It is argued that fisheries and aquaculture can provide compensation for other adaptation problems such as low lying agricultural land and should be considered a key component of adaptation strategies in the country.

#### B. National Level Policies and Strategic Documents

Cambodia's Initial National Communication to the UNFCCC was published in October 2002 (MOE, 2002). It speaks about adaptation needs generally and does not list potential adaptation options. These priorities were more clearly articulated in its NAPA, in which poverty reduction and increased agricultural production are repeatedly mentioned as the central goals of Cambodia's adaptation efforts. For Cambodia, adaptation policy and development policy are closely linked, and are at the forefront of the Rectangular Strategy for Growth, Employment, Equity and Efficiency. The Climate Change Department of the Ministry of Environment of Cambodia is in the process of finalizing Cambodia's Second National Communication (SNC) to the UNFCCC. These efforts include preparation of National Adaptation and Mitigation Plans and identification of technology, institutional and policy gaps. The SNC work will culminate in the preparation of the Climate Change Strategy and Action Plan, which is expected to commence in 2011.

Cambodia has a number of national policies on poverty, the environment and development; however adaptation is not a prominent component of these policies. The country's NAPA currently is the cornerstone of Cambodian adaptation planning and priority action identification. Major policy frameworks are much more generally focused and have goals more related to sustainable resource management and poverty reduction; as such, they have adaptation co-benefits. The country's most recent adaptation related policies and reports are listed in Table 1 below.



Table 1: Key Government Policies and Reports reflecting Adaptation Needs, Priorities and Planned Actions

Naı	me of Policy Action	Government Division Responsible	Status	Sector(s) of Focus	Summary description
1.	Rectangular Strategy for Growth, Employment, Equity and Efficiency: Phase I and II <sup>90</sup>	Royal Government of Cambodia	Published in 2004	Multi-sectoral	National level policy encompassing initiatives in all sectors targeted to improve poverty reduction and develop economic growth. Recognizes that climate change is one of the key challenges facing Cambodia and is one of the main threats to its development. Commits to ensuring environmental sustainability, through sustainable management and use of natural resources.  Agriculture improvements include crop diversification, irrigation, research and development, infrastructure improvement, microfinance, and improved land management.  Water resource improvements include irrigation, expanded reservoirs, improved access, improved management of Mekong basin and encouragement of private sector support in development and management of irrigation.
2.	National Adaptation Programme of Action <sup>91</sup>	Ministry of Environment	Completed in 2007	Multi-sectoral	Provides a profile of national circumstances and vulnerability to climate change. Identifies key adaptation needs and criteria for priority activities. Concludes with a list of proposals for actions.
3.	Strategic Framework for Food Security and Nutrition in Cambodia <sup>92</sup>	Royal Government of Cambodia	2008 – 2012	Agriculture	The Framework was developed by the Council for Agricultural and Rural Development in a broad process of consultation involving various ministries and government agencies, development partners and Non-Governmental Organizations (NGOs), and especially the Technical Working Group on Food Security and Nutrition. Improving food security and nutrition is a development priority of the Royal Government of Cambodia, as is apparent from its current national strategic frameworks, including the Cambodia Millennium Development Goals, the Rectangular Strategy and the National Strategic Development Plan. The five main program goals and objectives to be undertaken in this strategy are focused on: (i) increased food security, (ii) increased food access, (iii) improved use and utilization of food, (iv) increased stability of food supply, and (v) enhanced institutional and policy environment for food

 $<sup>^{90}\</sup> Cambodia, \underline{http://www.phnompenh.um.dk/NR/rdonlyres/FB448000-1A59-4AB9-A352-477F16525778/0/RGCRectangularStrategypassw.pdf}$ 

<sup>91</sup> Cambodia, http://unfccc.int/resource/docs/napa/khm01.pdf
92 Cambodia, http://www.foodsecurity.gov.kh/News Events Ann.aspx?IdNews=442&chk=News



N	ame of Policy Action	Government Division Responsible	Status	Sector(s) of Focus	Summary description
					security and nutrition.
4	National Strategic Development Plan 2006-2010 (NSDP) <sup>93</sup>	Royal Government of Cambodia	Updated in 2009	Multi-sectoral	Formulated using the Rectangular Strategy, the NSDP synthesizes various policy documents, including the Millennium Development Goals and the National Poverty Reduction Strategy, and provides a framework and strategies for implementation to reach these goals.
5.	Strategy for Agriculture and Water <sup>94</sup>	Royal Government of Cambodia	2010 - 2013	Agriculture; Freshwater supply	The Strategy is identified to be instrumental for contributing to achieving the overall development goal of the NSDP, with its particular focus on improving the institutional and management capacity. The Strategy broadly identifies priority areas along with approximate targeting and sequencing of activities and cost estimates. The six main program components to be undertaken in this strategy are focused on: (i) policy and regulation, (ii) institutional capacity building and human resource, (iii) research and education (iv) food security, (v) water resource management and agricultural land management, and (vi) agricultural business and marketing.

## C. Current Adaptation Action

There are a number of nationally and regional adaptation projects and programs occurring in Cambodia at present. National projects are focused on capacity building, as well as some policy formulation, awareness raising, knowledge sharing, and community based adaptation activities. The main sectors of focus are agriculture, water, risk reduction and meteorology. Cambodia is participating in a slightly higher proportion of regional projects. These projects are primarily focused on capacity building, vulnerability assessment, research, and policy formulation within the areas of health, nature, water, risk reduction, and policy. Funders active in supporting adaptation action in Cambodia include: the Least Developed Countries Fund (LDCF), the World Bank's Climate Investment Facility, and the governments of Denmark, the European Commission, Sweden and the United States.

<sup>93</sup> Cambodia, http://www.cdc-crdb.gov.kh/cdc/aid management/nsdp.pdf

<sup>94</sup> Cambodia, http://www.foodsecurity.gov.kh/News Events Ann.aspx?IdNews=629&chk=News



Table 2: Current Adaptation Projects and Programs in Cambodia

Nar	me	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
Nat	tional Action							
1.	Building Adaptive Capacity and Ecosystem Resilience to Floods and Droughts in Indigenous and Minority Communities <sup>95</sup>	Assess and document local and indigenous perceptions and voices on climate change impacts, implications and responses, with a focus on floods and droughts.	GEF Small Grants Programme Budget: US\$45,994	Non-Timber Forest Products	Capacity building	2010	Disaster risk management	Two villages, one in Rattanakiri province and one in Stung Treng province
2.	Promoting Climate-Resilient Water Management and Agricultural Practices <sup>96</sup>	The project objective is to "enhance adaptive capacity, at the national, institutional and local levels, to climate change induced changes in water resources availability for the agricultural sector in Cambodia." Anticipated outcomes include: (1) improved capacity for development planning under conditions of climate change; (2) locally appropriate adaptation options adopted to reduce exposure to climate -induced risks; and (3) lessons learned in the pilot sites replicated in other vulnerable areas of Cambodia.	LDCF; co- financing Budget: US\$4,190,350	UNDP	Capacity building; Field implementati on	2009 - ?	Freshwater supply; Agriculture	
3.	Helping Address Rural Vulnerabilities and Ecosystem Stability (HARVEST) <sup>97</sup>	Building Cambodian resilience to climate change through adaptive measures in crop selection, water conservation and improved land management.	USAID  Budget: Adaptation Component estimate: US \$5 to 9	Fintrac, Inc.	Capacity building; Policy formation and implementati on; Field implementati	2010 – 2015	Agriculture	

<sup>95</sup> UNDP Small Grants Programme,

http://sgp.undp.org/web/projects/16439/building adaptive capacity and ecosystem resilience to floods and droughts in indigenous and minorit.html

<sup>96</sup> ALM, http://www.adaptationlearning.net/project/promoting-climate-resilient-water-management-and-agricultural-practices
97 http://www.state.gov/g/oes/rls/rpts/faststart/asia/151476.htm



Naı	me	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	_	Geographic focus (if any)
			million (life of project)		on			
4.	Preparation of a Strategic Pilot Program for Climate Resilience Project Phase 1 <sup>98</sup>	The objective of the project is to mainstream climate resilience into national and subnational development policies, plans and projects supported by scaled up financing of adaptation activities in the key development sectors and underpinned by (i) strengthened participation and coordination among stakeholders, (ii) science-based adaptation planning, and (iii) enhanced links between adaptation and disaster risk reduction measures.	Investment Fund Budget: US\$	ADB, World Bank, Royal Government of Cambodia	Policy formation and integration	2010 – 2011	Government; Disaster risk management	
5.	Cambodia Community Based Adaptation Programme (CCBAP) <sup>99</sup>	The project aims to: (1) improve necessary capacity within NGOs, CBOs and local communities to implement community adaptation measures; (2) mainstream adaptation to climate change at the commune level; and (3) document and share lessons learned and good practices to influence changes of policy and program development.	SIDA Budget: US\$ 1,638,612	UNDP	Assessment; Community based adaptation; Policy formation and integration	2010 – 2012	Multi-sectoral	
6.	The Cambodia Climate Change Alliance <sup>100</sup>	<ul> <li>The objectives of this project are to:</li> <li>Support capacity development and institutional strengthening to prepare for and mitigate climate change risks.</li> <li>Directly help vulnerable communities by enhancing their resilience to climate</li> </ul>	SIDA, DANIDA, UNDP, EU Budget: US\$8,901,00	UNDP	Capacity building; Knowledge communicatio n; Field implementati	2010 – 2012	Multi-sectoral	Cambodia

 $<sup>^{98}\,</sup> CIF, \\ \underline{http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/cambodia} \\ ODA\, Database, \\ \underline{http://cdc.khmer.biz/} \\$ 

<sup>99</sup> Cambodia ODA Database, <a href="http://cdc.khmer.biz/">http://cdc.khmer.biz/</a>

<sup>100</sup> UNDP, http://www.un.org.kh/undp/what-we-do/projects/cambodia-climate-change-alliance and http://www.un.org.kh/undp/media/files/projects/factsheets/factsheet-Cambodia Climate Change Alliance.pdf



Nar	me	Objectives		Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
		change and other natural hazards.	0		on			
7.	considering Livelihood Improvement and Ecosystems <sup>101</sup>	To reduce the vulnerability of coastal communities to climate change impacts by strengthening government policy and increased scientific understanding. Planned outcomes focus on: (1) building institutional capacity to assess climate change risks and integrate them into national development policies; (2) improving adaptation planning in the coastal zone; (3) reducing the vulnerability of productive systems to increased floods; and (4) increasing resilience of coastal buffers to climate change. It responds to NAPA priorities related to the "rehabilitation of coastal protection infrastructure" and "community mangrove restoration and sustainable use of natural resources", and contributes to adaptation priority "assessment of needs for setbacks, vegetation buffers and protection structures in coastal zones."	LDCF; Cambodia Budget: US\$5.88 million	UNEP, Ministry of Environment of Cambodia	Capacity building; Policy formation and integration; Assessment	2011 – 2014	Coastal zone management	Provinces of Sihanoukville, Kampot, Koh Kong, and Kep
Par	ticipation in Regional and Glo	bal Projects					·	
8.	Changes, Impacts and Responses in the Mekong	This United Nations University (UNU) multi- partner initiative will undertake a trans- disciplinary analysis of threats to human	UNU	UNU	Research	2007 – 2010	Human health; Ecosystem conservation	Regional: Cambodia, Viet Nam
	Delta to Human Wellbeing and Ecosystem Integrity <sup>102</sup>	health and well-being and to ecosystem integrity caused by climate change. It will also respond to large-scale changes in the Mekong Delta region shared by Cambodia	In Cambodia: 1	to be determined	I			

<sup>&</sup>lt;sup>101</sup> GEF, http://gefonline.org/projectDetailsSQL.cfm?projID=3890 
<sup>102</sup> UNU, http://www.inweh.unu.edu/River/MekongDelta.htm



Nan	ne	Objectives	, ,	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
		and Viet Nam. Assessment tools will be developed to evaluate the chain of events from environmental change to impacts on human well-being and ecosystem health.						
9.	Health Vulnerability and Climate Change Adaptation Assessments <sup>103</sup>	To provide national level evidence of the linkages between climate and health; improve understanding of local and specific health risks and vulnerabilities; provide the opportunity for capacity building; and serve as a baseline analysis to monitor how health risks may be influenced by a changing climate over time.	World Health Organization	Ministries	Assessment	(Closed)		Global: 15 countries including Bolivia, Brazil, Cambodia, Costa Rica, Ghana, India, Kyrgyz Republic, Mongolia and Tunisia
10.	Pilot Program for Climate Resilience (PPCR) <sup>105</sup>	PPCR aims to pilot and demonstrate ways in which climate risk and resilience may be integrated into core development planning and implementation in a way that is consistent with poverty reduction and sustainable development goals. In this way, the PPCR provides incentives for scaled-up action and initiates transformational change. The pilot programs and projects implemented under the PPCR are countryled, build on NAPAs and other relevant country studies and strategies.	In Cambodia: \ World Bank's Strategic Climate Fund Budget: US\$971.75 million pledged as of February 2011	/ulnerability asse	Policy formation and integration	2008 –		Regional Programs: Caribbean and Pacific Country programs: Bangladesh, Bolivia, Cambodia, Mozambique, Nepal, Niger, Tajikistan, Yemen,

<sup>&</sup>lt;sup>103</sup> WHO, http://www.who.int/globalchange/mediacentre/events/2010/costa rica consultation 200710/en/index.html

<sup>104</sup> Further information available here: http://www.who.int/globalchange/mediacentre/events/2010/costa\_rica\_consultation\_200710/CAMBODIA\_va.pdf 105 Climate Funds Update, http://www.climatefundsupdate.org/listing/pilot-program-for-climate-resilience



Nar	ne	Objectives		Implementing Agency(s)	Type of project	Duration	-	Geographic focus (if any)
								Zambia
			In Cambodia:	to be determined	I			
11.	Adaptation Knowledge Platform <sup>106</sup>	The goal of the Adaptation Knowledge Platform is to strengthen adaptive capacity and facilitate climate change adaptation in Asia at local, national and regional levels. Its specific purpose is to establish a regionally and nationally owned mechanism that facilitates the integration of climate change adaptation into national and regional economic and development policies, processes and plans, strengthen linkages between adaptation and the sustainable development agenda in the region and enhance institutional and research capacity, in collaboration with a wide range of national	SIDA	UNEP Regional Resource	Capacity building; Policy formation and integration	2009 – 2012	Government	Asia: Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, the Philippines, Sri Lanka, Thailand, Viet Nam
		and regional partners.	resilience a • Piloting of a the sub-nat planners at	ito existing adap t the community adaptation plann ional level, kinke this level. organization: UN	level. ing, mainstrean d to awareness	ning into over	rall development	planning at
12.	The MRC Climate Change and Adaptation Initiative <sup>107</sup>	The initiative seeks to understand the impacts of climate change in the lower Mekong basin, assess the types of adaptation actions that will have to be undertaken to respond to climate change, foster dialogue with the relevant stakeholders, and address the issue of	Approximate ly US\$15-	Mekong River Commission with ADPC, ACIAR, CARE International, CSIRO, GIZ, FAO, GMSARN,	Research; Capacity building; Assessment; Knowledge communicatio n	2009 – 2025 In three five-year phases Phase 1:	management	Regional: Cambodia, Lao PDR, Thailand, Viet Nam

<sup>&</sup>lt;sup>106</sup> AKP, <a href="http://www.climateadapt.asia/">http://www.climateadapt.asia/</a>
<sup>107</sup> MRC, <a href="http://www.mrcmekong.org/ccai/Climate-change-n-adaptation-initiative.htm">http://www.mrcmekong.org/ccai/Climate-change-n-adaptation-initiative.htm</a>



Nar	ne	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
		gender and climate change. In addition to the creation of technical papers, and assessments outlining adaptation issues and recommended actions, the Climate Change and Adaptation Initiative also develops educational documents for outreach with local residents on the issues of climate change and adaptation.	first two phases <sup>108</sup>	ICEM, IUCN, IWMI, JIID, Lux- Development, Southeast Asia START Regional Center, SEI, SIDA, UNDP, UNEP, WWF, Wetlands Alliance		2011 – 2015		
			In Cambodia:	to be determined	I			
13.	Lower Mekong Initiative 109	The initiative aims to increase cooperation between the Lower Mekong countries and the United States in the areas of environment, health, education and infrastructure development. It seeks to further understanding of shared concerns, including vulnerability to climate change, transboundary water management and infectious diseases. Ongoing activities include: Forecast Mekong, which is a "data integration, modeling and scientific visualization tool" that will be used to show the projected impacts of climate change; and the "sister-rivers partnership" that allows for sharing of best practices in areas such as climate change adaptation between the Mississippi River Commission and the MRC. <sup>110</sup>		Various to be determined	Assessment; Capacity building; Knowledge communicatio n	2010 – ?	Climate information services; Watershed management; Human health	Regional: Cambodia, Lao PDR, Thailand, Viet Nam Plus: United States

MRC, http://www.mrcmekong.org/ccai/ccai-framework-document-extraction09.pdf
 USDS, http://www.state.gov/p/eap/mekong/
 USDS, http://www.state.gov/p/eap/mekong/faq/index.htm



Nan	ne	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
'	Climate Sensitive Flood Water Management in the Lower Mekong Basin <sup>111</sup>	The project is strengthening the capacities of relevant professional bodies in the four riparian states of Cambodia, Lao PDR, Thailand and Viet Nam, as well as the Secretariat of the Mekong River Commission to project the impacts of climate change. The	ŕ	Mekong River Commission, GIZ	Capacity building; Assessment; Policy formation and integration	2010 – 2012	Disaster risk management; Climate information services	Regional: Cambodia, Lao PDR, Thailand, and Viet Nam
		aim is for the countries to be better equipped to prevent or mitigate the growing risk of flooding and the damage arising from it.	In Cambodia:	to be determined	1			
	Building Climate Resilience of Mekong Hydropower Dams <sup>112</sup>	Assist the Mekong River Commission and the four Lower Mekong countries to strengthen the climate resilience of both their existing and planned dams with a view to improve sediment management practices. The project	Budget: US\$1.9 million	National Heritage Institute	Capacity building	2010 – 2013	Energy	Regional: Cambodia, Lao PDR, Thailand, Viet Nam
	Knowledge Center on Climate Change: Adaptation and Best Practices in Agriculture and Natural Resources Sectors <sup>113</sup>	supports the Lower Mekong Initiative.  The objectives of this project are:  Increasing understanding, knowledge and skills of those in the agriculture and natural resources sectors;  Making clients quickly access and learn about what is going on about climate change;  Responding to every client with quickness, courtesy, competency and accuracy;  Providing products that give clients easy access to cutting-edge research and	Southeast Asian Regional Center for Graduate Study and Research in	SEARCA's University Consortium in Southeast Asia, University of the Philippine Los Banos, World Fish Centre and the Adaptation Learning Mechanism	Capacity building; Knowledge	[2010 – 2014]	Agriculture; Climate information services	Regional: Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste, Viet Nam

<sup>111</sup> BMU, http://www.bmu-klimaschutzinitiative.de/en/projects?p=1&d=693 and MRC, http://www.mrcmekong.org/MRC\_news/press11/Germany-renews-itssupport-to-Mekong-Cooperation23Feb11.html

112 U.S. Dept. of State, http://www.state.gov/documents/organization/151686.pdf

113 KC3, http://beta.searca.org/kc3/ and ALM, http://www.adaptationlearning.net/project/knowledge-center-climate-change-kc3-adaptation-and-best-practices-

agriculture-and-natural-re



Nar	ne	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
		development results, learning events and policy advocacy.	million for 5 years	to be determined				
17.	Building Capacity to Adapt to Climate Change for Selected Southeast Asian Countries: Vulnerability assessment and economic analysis of adaptation <sup>114</sup>	The overall objective of the project is to build capacities for research, planning and action with respect to climate change and the economics of adaptation. The specific objectives are: a) to measure communities' vulnerability to climate change through research in selected communities; b) to produce maps of each community's relative vulnerability to climate change; c) to analyze social vulnerability of local communities in terms of gender, geographic location, ethnicity, and socio-cultural, demographic and political-economic variables; d) to identify locally appropriate adaptation options; e) to conduct an economic analysis of adaptation options; and, f) to formulate policy recommendations to enhance local capacity to adapt to climate change.	IDRC Budget: CND \$228,700	SEARCA, IDRC, College of Economics - Hue University of Viet Nam, and the Royal University of Phnom Penh of Cambodia to be determined	Assessment; Capacity building; Policy formation and integration	2011 – 2014	Government	Regional: Cambodia, Philippines, Viet Nam
18.	Global Climate Change Alliance <sup>115</sup>	The Global Climate Change Alliance seeks to deepen the policy dialogue between the European Union and developing countries on climate change; and to increase support to target countries to implement priority adaptation and mitigation measures, and integration climate change into their		National Governments	Policy formation and implementati on; Knowledge communicatio n	2008 – ongoing	Disaster risk management; Government	Global: 17 countries <sup>116</sup> and the Pacific region, including Cambodia

<sup>-</sup>

<sup>&</sup>lt;sup>114</sup> IDRC, <a href="http://www.idrc.ca/EN/Regions/South-East\_Asia/Pages/ProjectDetails.aspx?ProjectNumber=106326">http://www.idrc.ca/EN/Regions/South-East\_Asia/Pages/ProjectDetails.aspx?ProjectNumber=106326</a> and SEARCA, <a href="http://sis.searca.org/index.php/component/sobi2/?sobi2Task=sobi2Details&catid=28&sobi2Id=99">http://sis.searca.org/index.php/component/sobi2/?sobi2Task=sobi2Details&catid=28&sobi2Id=99</a>

<sup>115</sup> GCCA, http://www.gcca.eu/pages/1 2-Home.html

These countries are; Bangladesh, Belize, Cambodia, Ethiopia, Guyana, Jamaica, Maldives, Mali, Mozambique, Mauritius, Nepal, Rwanda, Senegal, Seychelles, Solomon Islands, Tanzania and Vanuatu.



Nan	ne	Objectives	, ,	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
		development strategies. The program's five priority areas for funding are: improving the knowledge base of developing countries to the effects of climate change; promoting disaster risk reduction; mainstreaming climate change into poverty reduction development strategies; reducing emissions from deforestation and degradation; and enhancing participation in the Clean Development Mechanism.	enable Cambo development • Funder(s): E • Budget: Eur	EU, UNDP, SIDA a os 2.2 million ng agency(s): Mir nmittee	align climate cha	ange interver	ntions with natio	nal
19.	Mekong River Basin Project on Addressing Climate Change Impacts on Agriculture and Natural Resources <sup>118</sup>	Helps communities assess climate change impacts on agriculture and ecosystems and strengthen adaptation capacity with respect to water resources, food security, livelihoods, and needs of vulnerable groups. The project supports the Lower Mekong Initiative.	USAID Budget: US\$9.0 million In Cambodia: 1	to be determined	Assessment; Capacity building	2011 – 2016	Agriculture; Ecosystem conservation	Regional: Cambodia, Lao PDR, Thailand, Viet Nam
20.	Asia Pacific Climate Change Adaptation Project Preparation Facility (ADAPT) <sup>119</sup>	Increase access to financial resources for climate change adaptation investment projects; strengthen national human and institutional capacity in preparation of financing proposals; and strengthen regional knowledge platform to share information and processes on climate change projects, funds and best practices to promote replication and scaling up.	USAID Budget: US\$18.0 million	WWF, Conservation International, the Nature Conservancy, ARD Inc., NOAA	Capacity building; Knowledge communicatio n	2011 – 2016	Government	Asia Region: Bangladesh Cambodia Federated States of Micronesia, Fiji, Indonesia, Lao PDR, Malaysia,

GCCA, <a href="http://www.gcca.eu/cgi-bin/datadirs.pl?&lg=2&id datadir family=1&extlink=8&sw=detail&id datadir sheet=6">http://www.gcca.eu/cgi-bin/datadirs.pl?&lg=2&id datadir family=1&extlink=8&sw=detail&id datadir sheet=6</a>
 USDS, <a href="http://www.state.gov/documents/organization/151686.pdf">http://www.state.gov/documents/organization/151686.pdf</a>
 USDS, <a href="http://www.state.gov/documents/organization/151686.pdf">http://www.state.gov/documents/organization/151686.pdf</a>



Name	Objectives		Implementing Agency(s)	Type of project		Geographic focus (if any)
		In Cambodia:	o be determined			Nepal, Palau, Philippines, Solomon Islands, Sri Lanka, Thailand, Viet Nam
		iri Carriboala: t	o de determinec	1		

# D. Proposed Adaptation Action

Through the completion of its NAPA, Cambodia identified a number of priority adaptation projects for funding. The level of detail for these proposed actions is quite general and may be elaborated upon in the future. As well, Cambodia has proposed projects for funding to the Special Climate Change Fund (SCCF). These planned adaptation projects are presented in Table 3.

Table 3: Proposed Adaptation Projects and Programs in Cambodia

Na	me	Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)		
Pr	Projects proposed in NAPA						
1.	Rehabilitation of a Multiple-Use Reservoir in	To improve water storage capacity for multiple uses including irrigation, water supply for urban areas,		Agriculture; Freshwater supply	Takeo		
	Takeo Province	recreational uses and enhanced aquatic biodiversity.	Notes: Budget proposed in NAPA: \$4,000,000				
2.	Rehabilitation of Multiple- Use Dams in Takeo and	in Takeo and including irrigation, water supply rural communities,		Agriculture; Freshwater supply	Takeo, Kampong Speu		
	Kampong Speu Provinces rec		Notes: Budget proposed in NAPA: \$2,500,000				
3.	Community and Household Water Supply in Coastal	To provide safer water for rural communities in coastal areas; and to reduce the incidence of water-related		Coastal zone management	Kampot, Kep and Koh, Kong		
	Provinces	diseases.	Notes: Budget proposed in NAPA: \$1,00,000				
4.	Development and Rehabilitation of Flood Protection Dikes	To protect settlements and agricultural fields from flood.		Agriculture; Freshwater supply	Battambang, Kampong Cham, Kandal, Kratie, Pursat, Sihanoukville and Svay Rieng		



Na	me	Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)
			Notes: Budget proposed in NAPA: \$5,000,000		
5.	Rehabilitation of Upper Mekong and Provincial Waterways	<ul> <li>To reduce risks caused by Mekong floods</li> <li>To improve fishery resources</li> <li>To improve rural livelihoods by supplying sufficient water for irrigation and domestic uses; and</li> </ul>	Notes: Budg	Agriculture; Freshwater supply et proposed in NAPA: \$	Provinces along upper Mekong, Koh Kong, Prey Veng, Pursat and Svay Rieng 30,000,000
		- To improve provincial water transportation			
6.	Rehabilitation of Multiple- Use Canals in Banteay	To enhance water storage capacity for general use in the village during the dry season.		Coastal zone management	Kampot
	Meas District, Kampot Province		Notes: Budget proposed in NAPA: \$1,500,000		
7.	Vegetation Planting for Flood and Windstorm Protection	To reduce flood and windstorm damage to property and crops.		Multi-sectoral	Kampong Thom, Kampot, Kratie, Sihanoukville, Takeo, Prey Veng, Battambang and Banteay Meanchey
			Notes: Budget proposed in NAPA: \$4,000,000		
8.	Strengthening of Community Disaster Preparedness and	- To ensure preparedness for and effective response to climate hazards at the community level; and - To reduce climate hazard risks for local communities.		Multi-sectoral	Banteay Meanchey, Kampong Cham, Kampong Speu, Kampot, Kandal, Prey Veng, Svay Rieng and Takeo
	Response Capacity		Notes: Budget proposed in NAPA: \$5,000,000		
9.	Water Gates and Water Culverts Construction	<ul> <li>To regulate flood water around the newly rehabilitated road network; and</li> <li>To minimize road and crop damage caused by flood.</li> </ul>		Agriculture; Transportation	Banteay Meanchey, Kampong Cham, Kandal, Kratie, Prey Veng, Siem Reap, Svay Rieng and Takeo
			Notes: Budget proposed in NAPA: \$10,000,000		
10.	Safer Water Supply for Rural Communities	- To provide safe water in sufficient quantities for rural communities; and - To reduce the risk of contracting water-related diseases.		Agriculture; Freshwater supply	Battambang, Kampong Cham, Kampong Speu, Kampong Thom, Kandal, Kratie, Prey Veng, Ratanak Kiri and Takeo
			Notes: Budget proposed in NAPA: \$5,000,000		
11.	Development and Improvement of Small- Scale Aquaculture Ponds	- To ensure food security in the areas where wild fish stocks are insufficient to meet demand; and - To increase the income of people living in these areas.		Freshwater fisheries	Kampong Cham Kampong Speu Kandal, Kratie, Sihanoukville and Svay Rieng
			Notes: Budg	et proposed in NAPA: \$	4,000,000



Name		Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)	
12.	Promotion of Household Integrated Farming	- To increase agricultural productivity; and - To improve farmers' incomes, food security and livelihoods in the areas affected by flood and drought.		Agriculture; Freshwater supply	Banteay Meanchey, Battambang, Kampong Speu, Prey Veng, Svay Rieng and Takeo	
			Notes: Budget proposed in NAPA: \$2,500,000			
13.	Rehabilitation of Coastal Protection Infrastructure	- To increase agricultural production in coastal areas.		Agriculture; Freshwater supply	Kampot, Kep, Koh Kong and Sihanoukville	
			Notes: Budget proposed in NAPA: \$2,000,000			
14.	Development and Improvement of Community Irrigation Systems	- To provide sufficient water for rice farming; - To reduce the risk of crop failures from water shortage; and - To enhance food security and assist in eliminating poverty among rural people.		Agriculture; Freshwater supply	Banteay Meanchey, Battambang, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kampot, Kandal, Kratie, Prey Veng, Pursat, Ratanak Kiri, Siem Reap, Svay Rieng and Takeo	
			Notes: Budget proposed in NAPA: \$45,000,000			
15.	Community Mangrove Restoration and	- To stabilize shoreline; - To reduce sea water intrusion;		Coastal zone management	Kampot, Kep and Koh Kong	
	Sustainable Use of Natural Resources	- To reduce coastal erosion; and - To protect coastal areas from storm.	Notes: Budget proposed in NAPA: \$1,000,000			
16.	Community Based Agricultural Soil Conservation in Srae Ambel District, Koh Kong Province	- To reduce soil erosion from agricultural land in the coastal watershed; and - To increase food security.	Notes: Budg	Coastal zone management; Agriculture get proposed in NAPA: \$	Koh Kong 52,000,000	
Ac	ditional Projects in Developr	nent				
17.	Improve Water Resource Access and Management for Better Farming in Drought Prone Communities	This projects aims to reduce vulnerability and increase adaptive capacity to climate change, including drought, in seven villages of Chantrea district Svay Rieng, by building the capacity of communities to manage available water resources and irrigation systems for agricultural production, conservation of natural ecosystems and strengthen communities.	Notes: GEF	Agriculture Proposal: \$50,000,000	Chantrea district Svay Rieng	



Name	Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)
8. Supporting Sub-National		Capacity	Policy formation and	Cambodia, Sri Lanka, Ghana, Tunisia,
Level Decision Makers to		building	integration	Tanzania, Uruguay, Peru, Senegal,
Prioritize Adaptation				Albania, Philippines
Initiatives within		Notes: Proposed SCCF Funding = \$10 million; co-financing to be d		million; co-financing to be determined.
Development Planning				3
Frameworks <sup>120</sup>				

#### E. Assessment

Climate change is a high priority for Cambodia, as acknowledged through its national level strategic cross-sectoral planning, as well as through completion of its NAPA. The country has made progress in identifying key adaptation goals and priorities, and the government has established high level of knowledge on where its current adaptation gaps lie. Of the key adaptation priorities identified by the country, it appears that the areas of agriculture and water are receiving the bulk of attention through ongoing adaptation projects, although there appears to be a need for concrete initiatives such as building dikes to minimize the impacts of floods and testing climate resilient crops. A number of ongoing projects are also working to improve domestic capacity to address climate change at the policy level. Gaps in adaptation action appear to exist within the following areas:

- Human health: Identified as a priority through the country's NAPA and National Communication, there are presently very few adaptation activities addressing health underway in the country.
- Coastal zones: There presently do not appear to be any projects occurring within this area; however certain ongoing projects addressing adaptation within the water sector may touch upon these coastal zones although this is not explicitly mentioned.
- Fisheries: Fisheries are a critical part of the Cambodian's diet and future project work may seek to expand adaptation initiatives within this sector.
- Gender: although a component of a couple of regional projects, none of the initiatives identified in Cambodia specifically aim to understand and respond to the gender dimensions of climate change.

 $<sup>^{120}\,</sup>GEF, \underline{http://www.thegef.org/gef/sites/thegef.org/files/publication/adaptation-actions\_0.pdf}$ 



#### **References:**

Central Intelligence Agency [CIA] (2011). *The World Factbook: East and Southeast Asia::Cambodia.* Retrieved from <a href="https://www.cia.gov/library/publications/the-world-factbook/geos/cb.html">https://www.cia.gov/library/publications/the-world-factbook/geos/cb.html</a>

Ministry of Environment [MOE] (2002). Cambodia's Initial National Communication under the United Nations Framework Convention on Climate Change. Retrieved from <a href="http://unfccc.int/resource/docs/natc/khmnc1.pdf">http://unfccc.int/resource/docs/natc/khmnc1.pdf</a>

Ministry of Environment [MOE] (2006). National Adaptation Programme of Action to Climate Change (NAPA). Retrieved from <a href="http://unfccc.int/resource/docs/napa/khm01.pdf">http://unfccc.int/resource/docs/napa/khm01.pdf</a>

United Nations Development Program [UNDP] (2010). *Human Development Index (HDI) – 2010 Rankings*. Retrieved from <a href="http://hdr.undp.org/en/statistics/">http://hdr.undp.org/en/statistics/</a>

United States Department of State [USDS] (2010). Background Note: Cambodia. Retrieved from <a href="http://www.state.gov/r/pa/ei/bgn/2732.htm">http://www.state.gov/r/pa/ei/bgn/2732.htm</a>