

# *Future on the Banana Raft*

*Unmasking the Exigency of Climate Change Education for Sustainable Development*



S. Jahangir Hasan Masum

*Scoping on the State of Education on Climate Change in Asia and the Pacific:  
The Case of Bangladesh*



***Future on the Banana Raft: Unmasking the Exigency of Climate Change  
Education for Sustainable Development***

*A Report on the State of Education on Climate Change in Asia and the Pacific:  
The Case of Bangladesh*

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Cover photo: © 2010 CDP, A little girl is steering a Velah (a Raft Made from Banana Tree Trunks)

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*S. Jahangir Hasan Masum*

On behalf of the Research Team

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## Executive Summary

The Country Case Study in Bangladesh is a part of the Scoping Study on Climate Change and Environmental Education in Asia Pacific by the CLIMATE Asia Pacific Network. The objective of the scoping study is to identify the current state and gaps (in terms of policies and programs, structures and facilities; human resources; existing practices and technologies/tools) with focus on the climate change education. The study administered short questionnaire survey on 60 organizations from 24 Districts of Bangladesh. Six (6) organizations & three (3) individuals having experiences in climate change, sustainable development and environmental education from Advocacy & Campaign Networks, NGOs, government department and public university in Bangladesh were selected for a more in-depth study. Since all the case study participant are the leading organizations, the study findings should rather be seen as the current best educational scope on climate change available in Bangladesh. However, the survey findings presents the grassroots picture of Bangladesh.

Virtually (98.3%) all the organization reported to be involved in the issue of climate change. On climate change activities, two-third organizations targets adults (66.7%) for their work on climate change and more than two-fifth organizations targets Elderly/senior citizens (46.7%), Children (43.3%), Adolescents in school (41.7%). More than one-third organizations also targets Out-of school youths (35.0%) for their work on climate change. Majority of the organizations targets local communities (85.0%) for their work on climate change. More than four-fifth organizations are involved with campaign & advocacy (88.3%) as well as education & information dissemination (85.0%). More or less one-fourth organizations are involved with research, documentation, technology development (28.3%) as well as publications/communication materials development (25.0%)

All the organizations participated in the study reported that they consider climate change is one of the key reasons for environmental disasters in Bangladesh. The Climate change adaptation works are currently limited into awareness raising & agriculture-based adaptation. More organizations reported to be involved with climate change mitigation (61.7%) than adaptation (46.7%). Energy-saving Cooking Stove (40.5%) is found as the most common mitigation option that organizations in Bangladesh are currently working on.

The case study participant organizations & individual participants unanimously expressed that climate change & environment related education and training is very important for sustainable development in Bangladesh. However, Academicians perceive that few teachers & only a few NGOs seem to know that we are in a 'Decade of ESD. Bangladesh Government has yet to formulate a national plan for ESD. Government acknowledged that climate change education and training is not yet up to the expectations but far better than ever before.

The existing training courses offer basic knowledge on the changing climate, what impacts are likely to happen in Bangladesh, and how to respond to the changes, how to ensure Climate Resilient Development so that development is not compromised. Target learners are usually selected based on their commitment, interest and scope to use the training in their works. Majority of the educators and trainers have Masters, M.Phil or P.hd degree holder from different disciplines with 3 to 24 years of experience. Many of them also have specialized training on climate change. The currently available educators and trainers are much lower than the actual need. The technical quality of the contents and presentation skills has improved remarkably in the last few years. The use of Information, Communication & Technology (ICT), Internet, Digital Photography and even mobile video from the field has increased the knowledge sharing culture.

The scoping study identified lack of capacity on participatory, experimental, and inclusive teaching and learning methodologies and lack of quality training facilities are the key challenges for promoting climate change education in Bangladesh. At present, no institutional or formal knowledge of the environmental education reaches to the rural people of the country. Simple and non-technical pictorial catalogs, animations video or audio comics showing the complex inter-relationship(s) that exists between the natural environment, the social environment, and climate change is urgently required for the grassroots NGOs/CBOs.

Most of the NGOs know about the UN Decade of Education for Sustainable Development (UNDESD) began on but only a few knows the aim of the UNDESD. One of the key obstacles to Education for Sustainable Development is teacher knowledge and understanding, because of the lack of pre- and in-service teacher training in Education for Sustainable Development.

The scoping study identified that there is no formal network particularly focused on climate change education or even ESD, though many organizations or networks addressing ESD as an important component. More than two-third organizations (70.0%) expressed their willingness to be involved in our work at CLIMATE Asia Pacific, which hopes to link up education and capability building efforts in addressing peoples' vulnerability to climate change.

The scoping study recognized that Article 6 of the UNFCCC and Article 10(e) of the Kyoto Protocol which call on governments to address climate change education, training and public awareness issues relating to climate change, have not received the deserved attention at national level. Besides, majority of the institutions acknowledged that they have not critically explored the linkage between climate change education and the Article 6.

The study findings envisaged that climate change issues should not be addressed in isolation as an environmental, social or development related issue and climate change education could provide a potentially very powerful mechanism to holistically address climate change like adaptation and mitigation. Without ESD, development of culturally appropriate and locally relevant educational material for Climate change will remain a big challenge.

Climate change education should be part of an education for sustainable development. Because it helps people to develop the attitudes, skills and knowledge to bring about the changes in attitudes and lifestyles needed to tackle climate change as well as to make informed decisions for the benefit of themselves and others, now and in the future - and to act upon these decisions. Climate Change Education for Sustainable Development (CCESD) will help today's learners to understand what future may look like and how we should respond to the changing climate.

# Chapter 1

## *Introduction to the Scoping on the State of Education on Climate Change in Bangladesh*

### **1. Introduction & Background**

Sustainable development is expected to occupy the global political climate in the coming days to promote the concept of green economy and climate change education is needed to prepare the human resources to drive the Sustainable Development. The United Nations has designated the period 2005 to 2014 as the decade of “Education for Sustainable Development” is to integrate the concept of sustainable development in education processes around the world. The themes for the forthcoming United Nations Conference on Sustainable Development in Rio de Janeiro in 2012 (Rio+20) is “a green economy in the context of sustainable development and poverty eradication and the institutional framework for sustainable development”. The UNESCO World Conference on Education for Sustainable Development (ESD) which was held in Bonn, Germany in 2009 also highlighted the need for reorienting education and learning towards sustainable development. There was general consensus in the UNESCO expert seminar on climate change education in Paris during July 2009 that climate change education is an urgent need and should be interdisciplinary and holistic; integrating scientific, social, gender, economic, cultural and ethical dimensions. In the Budapest meeting (April 2008), the IPCC recognized that there is an increasing need for coordinated treatment of adaptation and mitigation within an integrated sustainable development strategy.

The Country Case Study in Bangladesh is a part of the Scoping Study on Climate Change and Environmental Education in Asia Pacific by the CLIMATE Asia Pacific Network. CLIMATE Asia Pacific (CAP) is a newly formed network of Environmental Educators and Advocates from Asia-Pacific countries; desiring to contribute to raising people’s awareness and capacities in addressing climate change and related environmental challenges. CLIMATE Asia Pacific commissioned Coastal Development Partnership (CDP) for the Country Case Study in Bangladesh.

The Scoping Study on Climate Change and Environmental Education in Asia Pacific is a collaborative research initiative of CLIMATE Asia Pacific, Dv International and ASPBAE. In simple context, it is a rapid mapping of the Climate Change Learning Initiatives in the Asia Pacific region, considering the following background perspectives:

- Grassroots communities are hardly aware of the environmental situation that is already harming their existence; much less understanding their causes and how to prevent or cope with the situation.
- Promote awareness and knowledge of grassroots communities on climate change and other environmental issues that are relevant to build resilience to threats to their human existence.
- In line with the initiative to build a network of environmental educators, the research hopes to help establish a picture of its working environment

Bangladesh is one of the countries that by next 20 years will be highly affected by the climate change. Based on the global expert review, it is envisaged that climate change education is urgent to prepare people in Bangladesh for the uncertain climate future. However, till to date there is no study on the state of education on climate change or quick reference for the stakeholders. Considering this context, Coastal Development Partnership (CDP) tried their best so that the Country Case Study in Bangladesh could serve as the first National Scoping Document on climate change education.

### 1.1. Objective, Methods and Target Groups of the Scoping Study

The objective of the scoping study is to identify the current state and gaps (in terms of policies and programs, structures and facilities; human resources; existing practices and technologies/tools) with focus on the climate change education.

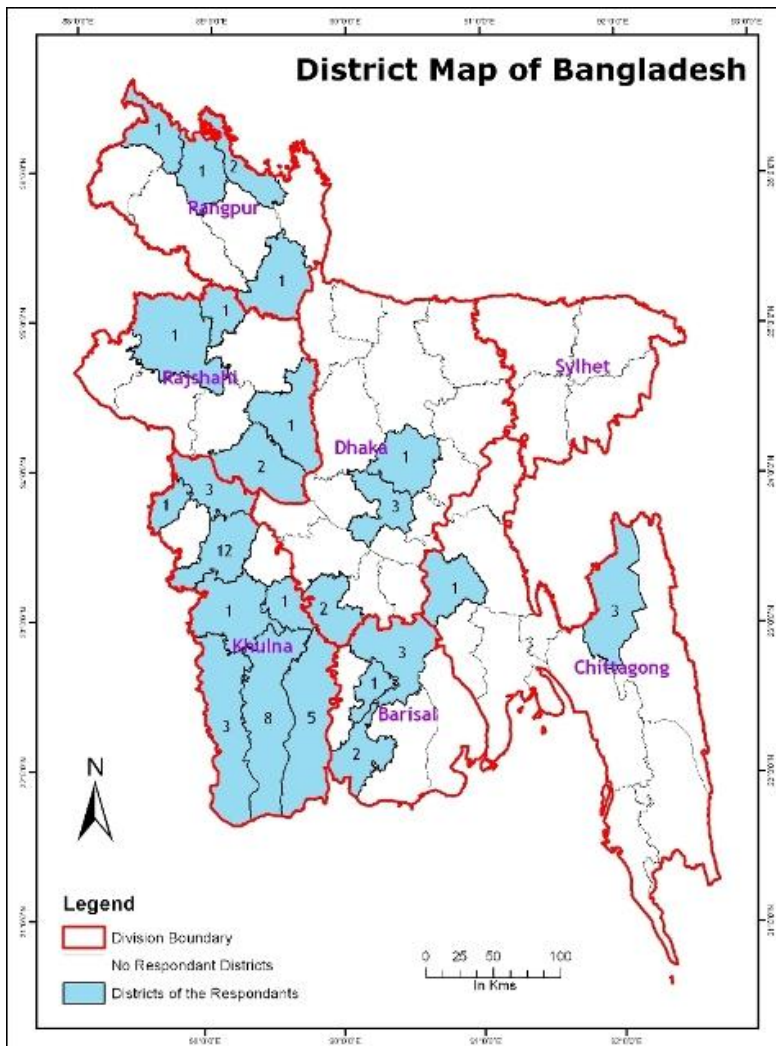
Objectives	Data Sets	Methodologies
1. <i>To find out existing initiatives and efforts in responding to climate change and other environmental concerns where environmental education plays a key strategy in current and future undertakings;</i>	a. Who are the stakeholders on environment, CC, sustainable development b. What are the responses c. What are the effects (positive and negative) d. What are the critiques to these initiatives e. How can education and training help in these endeavors f. Suggestions	Secondary data Desktop Research Questionnaire Survey Case Study
2. <i>To describe the current state of environmental education with focus on the theme of climate change and sustainable development</i>	a. What exists at the level of educating the learners b. What exists at the level of organizations (NGO and grassroots)? c. Who were the actual target learners? d. What exists in terms of the contexts and issues (in terms of policies and programs, for private and public; actual structures and facilities; human resources and technologies /tools)	Review of Documents of the Organization Questionnaire Survey Case Study
3. <i>To identify gaps in environmental education, especially on climate change and sustainable development;</i>	a. Needs that have not been responded to in terms of training designs/courses, materials development, capacity building of educators, target learners, training management needs etc. b. Suggestions	Questionnaire Survey Case Study Data Analysis
4. <i>To examine gaps in policy in terms of environmental education, especially climate change and sustainable development.</i>	a. Existing global policies on education b. Proponents of these policies c. Critique on these policies d. Gaps	Internet/Library Research Questionnaire Survey Case Study

The scoping study used the following methodologies and techniques:

- Review of literature and records
- Questionnaire Survey
- Interviews with key informants and
- Case Study

**Questionnaire method:** To ensure the widest coverage from all over the country, there was no maximum limit to the number of survey respondents. However, at the minimum, the number of respondents should be 36 for ensuring a statistically valid interpretation of the data. The study sent the scoping questionnaire to the 78 organizations through email and postal service. Initially the survey questionnaire was sent through email. However, majority of the organizations outside the cities faced problems to download the questionnaire due to slow internet connection. Then postal service was used. The study has received responses from 60 organizations from 24 Districts of Bangladesh. The study covered Lalmonirhat, Kushtia, Jhenidah, Dhaka, Barisal, Barguna, Bagerhat, Satkhira, Khulna, Jhalakati, Khagrachari, Jessore, Gopalganj, Sirajgonj, Naogaon, Chandpur, Joypurhat, Gazipur, Narail, Pabna, Gaibandha, Panchagarh, Meherpur and Nilphamari Districts of Bangladesh.

Organization Type	Administrative Division	Number
NGO	Dhaka	4
	Chittagong	4
	Rajshahi	5
	Khulna	33
	Barisal	6
	Rangpur	5
	<b>Total</b>	<b>57</b>
Educational Institution	Dhaka	1
	Khulna	1
<b>Total</b>	<b>2</b>	
Media	Dhaka	1



**Case study method:** The criteria for selecting case study organizations- of the six (6) organizations or networks to be interviewed, at least one should have community involvement. Regarding the three (3) prominent environmental/climate change educators and advocates to be interviewed, there should be gender representation, i.e., there should be male and female respondents. The case study followed a generic guide questions. The focus of the guide questions of the case study is climate change education in the context of environmental education; in addition, questions on how traditional knowledge can be used or is used in climate change education can also be explored.

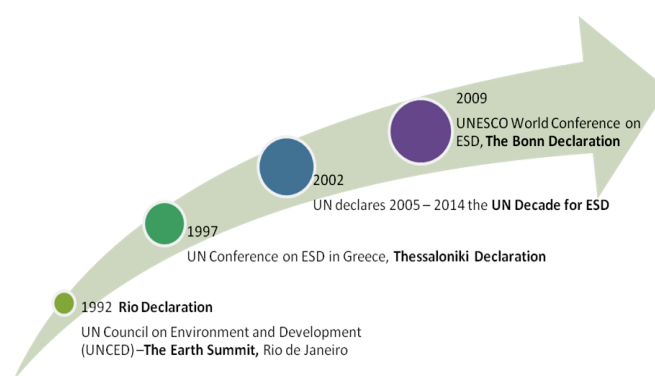
Advocacy & Campaign Network		
Bangladesh Paribesh Andolon (BAPA)	Civil Society Movement	Case study
Campaign for Popular Education (CAMPE)	National Coalition of NGOs working in the education sector	Case study
Campaign for Sustainable Rural Livelihood (CSRL)	A Network of more than 150 organizations	In-depth
Non-Governmental Organization (NGO)		
Bangladesh Center for Advance Studies (BCAS)	National Non-profit Non-Governmental Organization	Case study
Bangladesh Environmental Lawyers Association (BELA)	National Non-profit Non-Governmental Organization	In-depth
Coastal Development Partnership (CDP)	National Non-profit Non-Governmental Organization	Case study
Manusher Jonno Foundation (MJF)	National Non-profit Non-Governmental Organization	In-depth
Government		
Department of Environment (DoE); Ministry of Environment and Forest, Government of Bangladesh	Government Department	Case study
Higher Education Institute		
Khulna University	Public University	Case study

Environmental networks and organizations having experiences in climate change and sustainable development, and environmental education were selected for a more in-depth study. Among the targeted 10 institutions & 6 individuals, the scoping study managed to get 6 key organizations & 3 key individuals from Advocacy & Campaign Networks, NGOs, government department and public university in Bangladesh. All the Case study respondents are leading national specialists on climate change, environment and sustainable development with international reputation & experience.

All the Advocacy & Campaign Networks participated in the study have grassroots members & activities. Bangladesh Environmental Lawyers Association (BELA) and Coastal Development Partnership (CDP) directly work with community. In addition, three prominent educators on the themes or environmental activists outside the six sample organizations were interviewed to provide the macro perspectives and insights on Bangladesh experiences.

### 1.2. Concept and Trends of the Education for Sustainable Development (ESD)

Education for Sustainable Development (ESD) is about redesigning the educational approach; it is about linking ideas to action, guiding and motivating people to become responsible to overcome global challenges including climate change, energy, biodiversity, ecosystems, water crisis, and poverty with sustainable solutions. ESD is experiential, authentic, and action-oriented education, utilizing real world sources, rather than relying exclusively on textbooks. ESD



brings together elements from many curricular areas at the same time, and integrates these through a sustainability lens, ensuring that students are able to address the key challenges we face. ESD requires changes in “how” teachers teach, not just “what” they are teaching. ESD emphasizes information analysis, not just information transfer. Sustainable Development (SD) is a global framework for encouraging development that is good for both people and the planet.

**Education for Sustainable Development (ESD): Core Issues in Asia-Pacific**

<i>Issues</i>	<i>Examples</i>
Information and Awareness Knowledge Systems	Eco-media, media literacy, ICT Learning for local and indigenous knowledge, integrating traditional and modern technologies
Environmental Protection and Management Peace and Equity	Biodiversity, climate change, natural resources, conservation Conflict resolution, peace, equity, appropriate development, democracy
Local Context Transformation	Community development, empowerment Rural transformation, urbanization, sustainable habitat, water, sanitation, public infrastructure
Culture Cross-Cutting Issues and Themes	Diversity and intercultural/interfaith understanding Human rights, citizenship, gender equality, sustainable futures, holistic approaches, innovation, partnerships, sustainable production and consumption, governance
Health Environmental Education	HIV/AIDS, malaria Integrated pest management, environmental awareness, community recycling programmes
Engagement of Leaders	Professional training courses, executive education, partnerships, networking

Source: Working Paper: Asia-Pacific Regional Strategy for Education for Sustainable Development Second Edition/UN Decade of Education for Sustainable Development (2005-2014) UNESCO Bangkok, 2005

In 1992, ESD gets special attention in Chapter 36 of the Agenda 21 (the blueprint for the 21<sup>st</sup> century devised during the UN Council on Environment and Development, known as the Earth Summit) for Promoting Education, Public Awareness and Training. In 1997, the UN Conference on ESD held in Thessaloniki, Greece, clarified the concept of ESD by pointing out that “the concept of sustainability encompasses not only environment, but also poverty, population, health, food security, democracy, human rights and peace”. In 2002, the United Nations declared the *Decade of Education for Sustainable Development (UNDESD; 2005-2014)*, to integrate the principles, values, and practices of sustainable development into all aspects of education and learning with UNESCO as the lead agency. The UNDESD educational effort aims to encourage changes in behavior for creating a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations. In 2009, the UNESCO World Conference on Education for Sustainable Development was held in Bonn, Germany to assess progress globally at the midpoint of UNDESD. The Bonn Declaration receives unanimous consent from the participants and discussed at the 35th session of the UNESCO General Conference.

**1.3. Global, Asia-Pacific and Bangladesh Context of Climate Change**

**Global Context:** Global warming and climate change are already happening, and will continue at some level, even if fossil fuel use were to stop immediately, because a significant part of the CO<sup>2</sup> remains in the atmosphere for centuries (Monastersky 2009<sup>1</sup>). Climate change is anticipated to have far reaching effects on the sustainable development of developing countries including their ability to attain the United Nations Millennium Development Goals by 2015 (United Nations 2007<sup>2</sup>). The global average temperature is expected to increase by about 0.2°C per decade over the next two decades<sup>3</sup>. Recovery of the Earth’s climate in the absence of any mitigation measures could take 100,000 years or more.

1 Monastersky, Richard. “Climate Crunch: A burden beyond bearing.” Nature 458, 1091-1094 (2009)

2 UN. 2007. The Millennium Development Goals Report, United Nations. New York. <http://www.un.org/millenniumgoals/pdf/mdg2007.pdf>

3 IPCC, 2007: "Fourth Assessment Report (AR4), Intergovernmental Panel on Climate Change (IPCC), 2007

**Asia-Pacific Context:** Projected sea level rise could flood the residence of millions of people living in the low lying areas of South, Southeast and East Asia such as in Viet Nam, Bangladesh, India and China (Stern 2006<sup>4</sup>). Throughout Asia one billion people could face water shortage leading to drought and land degradation by the 2050 (Christensen *et al.* 2007<sup>5</sup>). Nearly one-third (30 percent) of the Asian coral reefs could be lost in the next 10 years (Cruz *et al.* 2007<sup>6</sup>) and such loss could be as high as 88 per cent (59 per cent of global) in the next 30 years (Sheppard 2003<sup>7</sup>). New patterns of disease have been driven by temperature and rainfall variation over time (WHO, 2008<sup>8</sup>). In Asia, the principal impacts of climate change on health will be on epidemics of malaria, dengue, and other vector-borne diseases (Martens *et al.* 1999<sup>9</sup>).

**Bangladesh Context:** All IPCC impact assessments carried out so far have identified Bangladesh as one of the most susceptible cases as regards the negative impacts of climate change. According to IPCC Fourth Assessment, the following changes in climate have been observed in Bangladesh:

- a) In Bangladesh, average temperature has registered an increasing trend of about 1°C in May and 0.5°C in November during the 14 year period from 1985 to 1998.
- b) The annual mean rainfall exhibits increasing trends in Bangladesh.
- c) Serious and recurring floods have taken place during 2002, 2003, and 2004. Cyclones originating from the Bay of Bengal have been noted to decrease since 1970 but the intensity has increased.
- d) Frequency of monsoon depressions and cyclones formation in Bay of Bengal has increased.
- e) Salt water from the Bay of Bengal is reported to have penetrated 100 km or more inland along tributary channels during the dry season.
- f) The precipitation decline and droughts has resulted in the drying up of wetlands and severe degradation of ecosystems.

#### 1.4. Bangladesh at a Glance

Bangladesh is an agro-economy based developing country in South Asia. Bangladesh is located between 20°34' and 26°38' latitude and between 88°01' and 92°41' east longitude. It is bordered on the west, north and east by India, on the south-east by Myanmar, and on the south by the Bay of Bengal. Bangladesh is one of the most densely populated countries in the world having more than 144 million people in an area of 147,570 square kilometer and a population density of more than 1,300 persons per km<sup>2</sup>, and 75% of the population lives in rural areas. The elevations in most of the country do not exceed

4 Stern N. 2006. The Stern Review on the Economics of Climate Change. HM Treasury, UK. Cambridge University Press. [http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/sternreview\\_index.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm)

5 Christensen J H, Hewitson B, Busuioc A, Chen A, Gao X, Held I, Jones R, Kolli R K, Kwon W-T, Laprise R, Magaña Rueda V, Mearns L, Menéndez C G, Räisänen J, Rinke A, Sarr A and Whetton P. 2007. Regional Climate Projections. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon S, Qin D, Manning M, Chen Z, Marquis M, Averyt K B, Tignor M and Miller H L (eds)]. Cambridge University Press. Cambridge, United Kingdom and New York, NY, USA

6 Cruz R V, Harasawa H, Lal M, Wu S, Anokhin Y, Punsalmaa B, Honda Y, Jafari M, Li C and Huu Ninh N. 2007. Asia. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Parry M L, Canziani O F, Palutikof J P, van der Linden P J and Hanson C E (eds). Cambridge University Press. Cambridge, UK. p469 – 506.

7 Sheppard C R C. 2003. Predicted recurrences of mass coral mortality in the Indian Ocean. *Nature*, 425: pp. 294 – 297.

8 World Health Organisation (2008). Climate change and Health. Report by the Secretariat. Executive Board, 124th Session, Provisional Agenda Item 4.8 (Geneva: WHO, EB124/11, 20 November 2008).

9 Martens P, Kovats R S, Nijhof S, de Vries P, Livermore M T J, Bradley D J, Cox J and McMichael A J. 1999. Climate change and future populations at risk of malaria. *Global Environmental Change*. 9: pp. S89 –S107.

10m. The land elevation of 50% of the country is within 5 meter of Mean Sea level (MSL). Floodplains occupy about 80 percent, hills about 12 percent and uplifted blocks ('terraces') about 8 percent of the country. About 68% of the country is vulnerable to flood and 20-25% of the area is inundated during normal flood. A humid, warm, tropical climate prevails over Bangladesh which is primarily influenced by monsoon and partly by pre-monsoon and post-monsoon circulations. The mean annual rainfall is about 2300mm. Cyclone and tidal bores have increased in the last 15 years. The low-lying coastal zone has several ecosystems that have important conservation value: mangrove, marine, estuary, islands, coral, sandy beaches which provides habitat for an abundance of plant species as well as an array of fish and wildlife.

**Importance of Bangladesh in Global environmental context:** In Global context, Bangladesh holds the longest natural beach of the world (the southeast coast of Bangladesh) and the Sundarbans; the largest single block mangrove ecosystem in the world (shared with India), 798<sup>th</sup> UNESCO world heritage site, Ramsar Wetlands (the southwestern coast of Bangladesh). The Sundarbans Mangrove Forest is the most diverse mangrove ecological alcove in the world and the largest remaining habitat in the world for the Royal-Bengal Tiger. The Sundarbans Mangrove Forest is also one of the most organic productive areas in the world.

### ***1.5. Education System in Bangladesh***

The present education system of Bangladesh may be broadly divided into three major stages, viz. primary, secondary and tertiary education. Primary education is the first level of education which is comprised of 5 years of formal schooling (class / grades I - V). Primary education begins at 6+ years of age up to 11 years. The second level of education is comprised of 7 (3+2+2) years of formal schooling. The first 3 years (grades VI-VIII) is referred to as junior secondary; the next 2 years (grades IX -X) is secondary while the last 2 years (grades XI - XII) is called higher secondary. Junior secondary/secondary and higher secondary level institutions impart secondary education. The academic programme terminates at the end of class X when students are to appear at the public examination called S.S.C. (Secondary School Certificate). At the end of class XII, students have to appear the public examination called Higher Secondary Certificate (H.S.C). Only HSC holders are qualified for admission to higher education.

Degree pass, degree honours, masters and other higher-level institutions or equivalent section of other related institutions impart tertiary education for 2-6 years of formal schooling. After completion of master's degree, one can take up M.Phil and Ph.D courses in selected disciplines or areas of specialization; the duration is of 2 years for M.Phil and 3-4 years for Ph.D.

Education sector allocations are currently about 2.3 percent of GDP and 14 percent of total government expenditure. The management of the education system falls under two ministries - the Ministry of Primary and Mass Education (MoPME), responsible for primary education and mass literacy) and the Ministry of Education (MoE), responsible for secondary, vocational and tertiary education). Overall there

are more than 17 million students at the primary level, and over 8.0 million at the secondary level. Enrolments at the tertiary level are relatively small but growing very rapidly. Gross primary enrollment rates rose from 90 percent in the late 1990s to 98 percent in 2003, while a corresponding increase in enrollment rates at the secondary level rise to 44 percent. More than 98% of secondary schools are non-government. But Government pays 90% of the teacher and staff salary of these institutions.

There are 82 universities in Bangladesh. Out of these, 31 universities are in the public sector, while the other 51 are in the private sector. Out of 31 public sector universities, 29 universities provide regular classroom instruction facilities and services. South Asian University, Asian University for Women and Islamic University of Technology are the three international universities in Bangladesh. The formal environmental education started at first in primary stages after the five years of independence of Bangladesh in 1971. Environmental studies has introduced in higher education after a couple of decades from the inception of environmental studies at primary level. The University Grants Commission (UGC) of Bangladesh is the statutory apex body in the field of higher education in Bangladesh. The primary objectives of the UGC are to supervise, maintain, promote and coordinate university education. It is also responsible for maintaining standard and quality in all the public and private universities in Bangladesh. The UGC assesses the needs of the public universities in terms of funding and advice Government in various issues related to higher education in Bangladesh.

# Chapter 2

## Mapping the State of Education on Climate Change in Bangladesh: Findings & Analysis

### 2. Mapping the State of Education on Climate Change in Bangladesh

This chapter presents the study findings and relevant analyses of the findings. All the information collected from the survey and case studies are analysed together. It has to be noted that that this findings and analysis is not a catalogue of all the examples of education policy, practice and research on Climate Change in Bangladesh context. Since all the case study participant are the leading organizations, the study findings should rather be seen as the current best educational scope on climate change available in Bangladesh. However, the survey findings presents the grassroots picture of Bangladesh. Although UNESCO has recognized long ago about the importance of assimilation of scientific and technological information as well as communicable form of knowledge is prerequisite for socio-economic development in developing countries (UNESCO. 1982<sup>10</sup>), the rate of progress on such context is yet very slow in Bangladesh.

#### 2.1. Profile of the Targeted Stakeholders on Climate Change

Almost all the organizations (96.66%) participated in the questionnaire survey reported that they targets both women and men in their work on climate change.

Gender	60 N	100 %
All	58	96.66
Men	1	1.67
Women	1	1.67

Development workers and Government are found as most targeted stakeholders.

More than two-third organizations targets Development workers (71.7%) and Government (68.3%) for their work on climate change. Besides, majority of the organizations targets urban poor (60%) and business sector (48.3%) in their climate change activities. One-third of the organizations also targets Media (33.3%) and Indigenous peoples (33.3%). Nearly one-third of the organizations targets Fisher folks (31.7%), Labor/poor people (30.0%) and Middle class (30.0%). More than one-fifth organizations targets Educators (21.7%) & farmers (15.0%).

Targeted Stakeholders according to Sectoral or economic categories	60 N	100 %
Development workers	43	71.7
Government	41	68.3
Urban poor	36	60.0
Business	29	48.3
Media	20	33.3
Indigenous peoples	20	33.3
Fisher folks	19	31.7
Labor/poor people	18	30.0
Middle class	18	30.0
Educator	13	21.7
Farmers	9	15.0

In terms of age groups, adults are the key-targeted stakeholder. Two-third organizations targets adults (66.7%) for their work on climate change.

<sup>10</sup> UNESCO. 1982. Draft medium-term plan (1984-1989). Second part, VII. Information systems and access to knowledge. General Conference Fourth Extraordinary Session, Paris.

Age Groups	60 N	100 %
Adults	40	66.7
Adolescents in school	25	41.7
Out-of school youths	21	35.0
Children	26	43.3
Elderly/senior citizens	28	46.7

On climate change activities, more than two-fifth organizations targets Elderly/senior citizens (46.7%), Children (43.3%) and Adolescents in school (41.7%). More than one-third organizations also targets Out-of school youths (35.0%) for their work on climate change.

In ecosystem context, plain/low land is found as the most targeted geographic setting. Two-third organizations targets plain/low land (66.7%) for their work on climate change. Nearly half of the organizations targets coastal and river (46.7%) areas for their work on climate change. More than one-sixth organizations targets upland/mountainous (16.7%) regions for their work on climate change.

Ecosystems	60 N	100 %
Plain/Low land	40	66.7
Upland/mountainous	10	16.7
Coastal and River	28	46.7

Geographical Coverage/Reach	60 N	100 %
Local communities	51	85.0
National/country-wide	33	55.0

In Geographical Coverage, majority of the organizations targets local communities (85.0%) for their work on climate change. However, more than half of the organizations also target national coverage (55.0%) for their work on climate change.

## 2.2. Involvement in Education & Training Works on Climate Change & Environment

All the survey participating organization reported to be involved with ecological/environmental concerns and virtually (98.3%) all the organization reported to be involved in the issue of climate change.

	N	%
Yes, our organization is involved in ecological/environmental concerns	60	100.0
Yes, our organization is involved in the issue of climate change	59	98.3

The scoping study survey revealed that organizations are currently involved with the different activities.

Organizational Action/Strategies	Rank	60 N	100 %
Campaign and Advocacy	01	53	88.3
Education and Information Dissemination	02	51	85.0
Networking and Alliance Building	03	43	71.7
Training/Capacity Building	04	43	71.7
Climate Change Mitigation	05	37	61.7
Climate Change Adaptation	06	28	46.7
Legislative Lobbying and Policy Advocacy	07	28	46.7
Research, Documentation, Technology Development	08	17	28.3
Publications/Communication Materials Development	09	15	25.0
Health and Environment	10	7	11.7
Eco-Tourism	11	3	5.0

More than four-fifth organizations are involved with campaign & advocacy (88.3%) as well as education & information dissemination (85.0%). More than two-third organizations are involved with networking & alliance building (71.7%) as well as training/capacity building (71.7%). Nearly half of the organizations are involved with legislative lobbying & policy advocacy (46.7%). More or less one-fourth organizations are involved with research, documentation, technology development (28.3%) as well as publications/communication materials development (25.0%)

Climate Change Mitigation	N	%
Energy-saving Cooking Stove	15	40.5
Energy Efficiency & Energy Conservation Awareness	10	27.0
Forestry (carbon dioxide capture and storage)	10	27.0
Sustainable Hill cultivation	2	5.4
Total	37	100.0

More organizations reported to be involved with climate change mitigation (61.7%) than adaptation (46.7%). Energy-saving Cooking Stove (40.5%) is found as the most common mitigation option that organizations in Bangladesh are currently working on. More than one-fifth organizations reported to working on energy efficiency and conservation Awareness (27.0%) and carbon dioxide capture and storage through forestry (27.0%).

Climate Change Adaptation	N	%
adaptation of species, seeds with changing climate	17	60.7
Floating Cultivation/ agriculture	1	3.6
Awareness development	10	35.7
<b>Total</b>	<b>28</b>	<b>100.0</b>

The Climate change adaptation works are currently limited into awareness raising & agriculture-based adaptation. Almost two-third organizations reported that their adaptation works is focused on agriculture-based adaptation (64.3%). Rest of the organizations is mainly raising awareness on climate change adaptation (35.7%).

### 2.2.1. Sectoral Approaches on Climate Change & Environmental Issues

**Advocacy & Campaign Networks:** Advocacy & Campaign Networks are mainly focused on policy advocacy through issue based campaign and thematic seminars, round table discussions, publications etc according to their core mandate such as environmental protection, sustainable rural livelihood, agriculture, trade, climate change and quality education for all. In additions, these networks organize trainings for their member. Education focused networks conducts specific advocacy to include environmental education in curriculum and all levels of educational institute. Advocacy & Campaign Networks use their publications as popular education materials to enhance the knowledge base of their members for better advocacy & campaign initiatives and also to extend their works all over the country.

	programs and services	target sectors/groups
<b>Advocacy &amp; Campaign Network</b>	Seminars, Meetings, Conferences, Publications, Workshops, Rallies and Demonstrations Development & Popularization of Quality Education Materials and Innovative Literacy Models, Advocacy and Lobbying, campaign	civil society, young people, social activist, scientists, academicians, business man, women, local, national and international development and civil society organizations and Policy makers grassroots development workers, trainers, managers, primary & secondary school teachers, cultural performers, Journalists, Farmers & people’s representatives
<b>Non-Governmental Organization (NGO)</b>	pro-poor, gender sensitive project implementation, multidisciplinary action research & evidence based policy advocacy, research & training, popular education materials development	socially excluded, renewable natural resource dependent poor & marginalized women, Indigenous people, local journalists, grassroots organizers, local NGOs, people’s representatives and government representatives Person with Disabilities
<b>Government</b>	Seminars, Meetings, Conferences, Publications, Day observations	Citizens of Bangladesh
<b>Higher Education Institution</b>	Higher education	Minimum HSC certificate holder youths

**Higher Education Institution:** Higher Education Institutes that have environmental discipline provide formal education & research opportunity on climate change causes, impacts and possible actions using national and international perspectives. However, major emphasis is given to the environmental pollution, disaster, environmental protection, environmental policies and legal frameworks etc.

**Non-Governmental Organizations (NGOs):** NGOs are piloting various community-based adaptation projects incorporating awareness raising, advocacy, training components based on existing coping methods that are ongoing at community or individual level. However, only a few NGOs have been working consistently on climate change for the last 6 years.

**Government:** The Ministry of Environment & Forests is the nodal agency in the administrative structure of the Central Government, for the planning, promotion, co-ordination and overseeing the implementation of environmental and forestry programmes. The Department of Environment (DOE) under the Ministry of Environment and Forestry (MoEF) is the focal point for the United Nations Framework Convention on Climate Change (UNFCCC) and coordinates climate related activities in the country. Recently, a Climate Change Cell (CCC) has been established to address several issues including adaptation to climate change. United Nations Development Programme (UNDP), and Ministry of Environment & Forests, GoB with the support from Least Developed Countries Fund (LDCF) are currently implementing projects to improve the resilience of coastal populations, settlements, and ecosystems in areas exposed to coastal hazards.

### *2.2.2. Factors that drives organizational involvement in climate change & environmental concerns*

The organizational involvement with the climate change & environmental concerns are linked with organizational mandate, commitment towards target groups and expertise on particular sector such agriculture, education etc. All the organizations participated in the study reported that they consider climate change is one of the key reasons for environmental disasters in Bangladesh. Most of the leading organizations including Bangladesh Center for Advance Studies (BCAS) are involved with climate change issues because they consider sustainable development and climate change as the ongoing key challenges for Bangladesh.

Advocacy & Campaign Networks considers climate change & environmental concerns as the national strategic issue and aims to integrate it with their ongoing networking activities. For example, the current emphasis on climate change education is the continuation of environmental education movement of the Campaign for Popular Education (CAMPE) which they have started in 1997. Bangladesh Poribesh Andolon (BAPA) as an environmental citizen movement has naturally involved with the climate change issues.

The agriculture of Bangladesh is one of the most vulnerable sectors due to climate change and at the same time, agriculture is biggest contributor for the rural economy and livelihood of the rural poor. This context drive many organizations like Coastal Development Partnership (CDP) & campaigns like Campaign for Sustainable Rural Livelihood (CSRL) to put more emphasis on the promotion climate justice and implantation of effective and equitable climate regime on the agriculture and rural livelihood sector. Many organizations have also started working on climate change considering it is a burning issue

for Bangladesh. For example, Manusher Jonno Foundation (MJF) is working to aware the mass people about the risks and vulnerabilities associated with the changing climate in Bangladesh.

Higher Education Institutions perceives that university students who will engage in various professional jobs within a few years, if they do not know how to address those challenges, then the national capacity will remain low. Within this context, Khulna University is preparing curriculums, teaching environmental discipline students for future climate leadership, and doing research on climate change to aware students, citizens and government.

Government considers that it is their responsibility to lead the national priority issues like climate change. However, it is upto the government to decide which government organizations will involve on what issues.

### ***2.3. Perception about the role of education/training to address climate change & environmental issues***

The case study participant organizations & individual participants unanimously expressed that climate change and environment related education and training is very important for sustainable development in Bangladesh. The knowledge about the type of climate change impacts and the extent and intensity of community exposure to climate change risks is a fundamental requirement for enhancing community resilience. To achieve sustainable development, it is necessary to change people's attitude, behavior and perceptions on environment and climate change. Easily understood materials on climate change issues and making them accessible to non-technical audiences through websites, outreach materials, campaigns, etc., will help to overcome the knowledge and information barrier to tackling climate change and will make it easier to work with key stakeholders to address climate change.

Higher Education Institutes expressed that climate change education for sustainable development is closely linked with the Education for Sustainable Development (ESD) vision. However, Academicians perceive that few teachers & only a few NGOs seem to know that we are in a 'Decade of ESD.

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#### ***Climate Forced Migration & displacement is Knocking at School Doors in SW Coastal Areas of Bangladesh***

The agro-ecological regions in Bangladesh are very diverse. However, in all the ecological regions the poor (including women, elderly and children), person with disabilities and indigenous communities are the most vulnerable and likely to also be most adversely impacted by climate change. In particular, these include the coastal areas of southern Bangladesh (vulnerable to increasing water level, salinity intrusion and cyclones), munga areas of north-western Bangladesh (which are prone to floods, droughts and river erosion) and haor areas of north-eastern Bangladesh (which are lowlands regularly affected by floods). The SW coastal people have been facing the continuous blow of cyclones; Cyclone "Sidr" in 2007, cyclone "Reshmi" in 2008 and in 2009 cyclone "Aila". These consecutive cyclones forced many poor families to migrate to the urban places as homeless, displaced family with traumatized children. Forced migration and displacement in a massive-scale due to substantial inundation of the coastal low-lying areas of Bangladesh is likely to happen and that may imbalance social harmony and conflict for resources. This might close the doors to the education system for millions of children in Bangladesh.

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Government acknowledged that climate change education and training is not yet up to the expectations but far better than ever before. Government has established the Climate Change Cell as the central facility providing dedicated service on climate change related issues and concerns for the Government. The participation from both GO & NGO representatives in UNFCCC and climate change conferences has increased.

#### 2.4. Educational Program and Services on Climate Change and Environment

Many government institutions & NGOs are providing climate change and environment related information, education and training to the citizens and making them aware about the negative impact on Bangladesh. Many professionals have also received international trainings from abroad. However, Advocacy & Campaign Networks opined that the overall progress is slow; quality & relevance are not yet satisfactory and incomplete information or resources are inadequate. Bangladesh Government has yet to formulate a national plan for ESD.

The basic vision of the ESD has not properly integrated with educational programs and services on Climate Change issues. The basic vision of the ESD, which calls for “a world where everyone has the opportunity to benefit from education and learn the values, behavior and lifestyles required for a sustainable future and for positive societal transformation”, has not received the deserved attention.

Educational/Training courses or activities on climate change & environment				
Status	Specific objectives & contents	Frequency /Year	Methods	
<b>Advocacy &amp; Campaign Network</b>	No regular training courses but educational activities through Meetings, Seminars, Conferences, Workshops & Trainings	All activities are linked with climate change & environment Environmental pollution (soil, air & water pollution), waste management, climate change impact, disaster, biodiversity conservation, gender & environment, Bangladesh Climate Change Strategy, Government responses on climate change	12- 40 meetings 2-4 seminars 10-12 Trainings 15-20 workshops	Question-Answer Motivational lecture Knowledge sharing Participatory Training Methods
<b>Non-Governmental Organization (NGO)</b>	Training support to UNDP, Government & NGOs training for climate change project staffs, grassroots NGO leaders, elected local government representatives & professionals, financial support for training to the NGOs	Climate change Adaptation & Mitigation, Climate Change & water, Safeguarding ecosystem, environmental governance, conservation, climate change vulnerability, increasing of resiliencies, empowering of vulnerable communities, promoting of local & indigenous knowledge.	Not fixed 4-24 trainings	5-days or 7-days thematic module based method Custom-tailored Module based Participatory Training Methods
<b>Government</b>	training to the Government Officials	climate risks and challenges in the context of government post-holders	Not fixed	Use Custom-tailored Module
<b>Public University</b>	Regular course on environmental impact assessment, environmental management, climate change impact, disaster management	Application of tools & methods that will be required in professional works	10-12 courses/ trainings	Lecture, practical, study tour, learning by doing

In the national curriculum for primary, secondary and higher secondary education, environmental science has been introduced as a separate subject. At this moment, the environmental science discipline is running in almost all public and many private universities, offering both graduate and post-graduate degrees. Environmental Science Discipline of Khulna University is the first Institute for higher environmental education in the public universities of Bangladesh. In 2008, Dhaka University introduced the Faculty of Earth and Environmental Science. Another public university, Jahangirnagar University is

running the Department of Environmental Sciences since 1999. The contribution of private universities in offering different environmental courses is also praiseworthy at the present time. North South University offers undergraduate and postgraduate degree on Environmental Science and Environmental Management. While universities like BRAC, Independent University Bangladesh (IUB) and Stamford University Bangladesh offer only postgraduate degree. They also offer different short-term courses for professionals working in the environmental & natural resource management field.

**Environmental Science Discipline, Khulna University, Khulna, Bangladesh**

Khulna University is the pioneers for introducing Environmental Science as an undergraduate program in Bangladesh, and continuing a four-year integrated course leading to the Bachelor of Science degree since 1996-97. The curricula and syllabus of the Environmental Science Discipline integrated multidisciplinary subjects pertaining to the science, studies, management and engineering and technological aspects of environmental problems.

The existing training courses offer basic knowledge on the changing climate, what impacts are likely to happen in Bangladesh, and how to respond to the changes, how to ensure Climate Resilient Development so that development is not compromised. The training courses on NGOs put more emphasis on understanding & managing climate risks by the communities.



**Designing process:** The designing educational/training courses or activities follow more or less similar process which generally done by the Internal Training Unit or hired Consultant. In most cases, design is guided by the capacity of the target learners and objectives of the training. The designing process starts with needs assessment and manual or module is finalized after the field test.

Organization Type	Socio-Economic & Demographic Background of the Target Learners	Reasons & ways for prioritizing Target Learners	Experience of Target Groups on Environmental Issues
<b>Advocacy &amp; Campaign Network</b>	University students, members of different social organizations, members of the networks, Grassroots NGO Staffs, School Teachers, Cultural Activists, Journalists, Farmers. National policy makers, Business associations, Journalists, Government officials, youth groups, researchers, Parliament members	Commitment for the environmental movement and have experience of field-based work Experienced and have scope to use the training in their works Those who have the potential to change but they do not realize that	In most cases, environmental experience is not a requirement for the target learners Environmentally responsive citizen and many of them All of them have experience on environmental movement
<b>Non-Governmental Organization (NGO)</b>	Government & NGOs, UNDP, Climate Change Vulnerable Community from all agro-ecological regions of Bangladesh (50% women), Community leaders, Climate Change Project Staffs. Indigenous community, grassroots NGO leaders, Union Parishad (elected local government representatives)	As part of consultancy service To prepare the vulnerable community for sustainable livelihood and to promote women leadership in climate change issues Stakeholders who can influence the grassroots community and who are chosen by the people	They have long experience in surviving within the different types of environmental hazards which are useful for for designing of future action plan for addressing the climate change situation.
<b>Government</b>	Government Officers	They will implement GO actions on climate change issues.	
<b>Public University</b>	Students	Meritorious and interested for higher education. They have to pass admission exam before enrollment	Environmental experience is not a requirement for the target students

**Target learners:** Advocacy & Campaign Networks and NGOs includes a wide range of people as target learners and try to maintain gender equity (50% or more women) in any training course. Target learners are usually selected based on their commitment, interest and scope to use the training in their works. Government primarily targets government officials. In most cases, environmental experience is not a requirement for the target learners. Recently, few NGOs are providing training to the elected local government representatives in rural areas. Universities mainly targets meritorious students and select target learners through admission test.

**Contents & Messages of Education and Trainings:** The technical quality of the contents and presentation skills has improved remarkably in the last few years. The use of Information, Communication & Technology (ICT), Internet, Digital Photography and even mobile video from the field has increased the knowledge sharing culture. All the organizations reported to use local knowledge and practices. However, knowledge and practices of the indigenous communities from remote coastal areas and hilly areas are yet to be included. Advocacy and Campaign Networks strongly address perspectives on climate change related training. NGOs follow their ideological positions and also provide political perspectives in the training according to the targeted learners skills and capacity. NGOs use the traditional wisdom and local case studies in the training.

The scoping study identified the following popular messages that explain climate change and environmental problems in Bangladesh:

- ✓ The man-made emissions of Greenhouse Gases or GHGs through energy consumption or the exploitation & combustion of fossil fuels are the root cause of climate change. Industrialization for the economic development, especially by the developed countries is mainly responsible man-made emissions of Greenhouse Gases.
- ✓ Deforestation is another root cause of climate change. Trees filter the air of carbon by taking in carbon dioxide and releasing oxygen.
- ✓ If the international community does not aggressively mitigate GHG emissions, climate change impacts will continue to increase in the future.
- ✓ The consequences of climate change will increase livelihood insecurity, malnutrition, unemployment, lack of safe drinking water and water-borne diseases in Bangladesh and about one third of the population would be vulnerable to climate change and sea level rise.
- ✓ The effects of increased flooding resulting from climate change will be the greatest problem faced by Bangladesh. Both coastal flooding (from sea and river water), and inland flooding (river/rain water) are expected to increase.
- ✓ Increased salinity intrusion due to sea level rise poses great threat to the Sundarbans Mangrove Forest. The utilization of surface water in the southwest region will be decreased due to high salinity limits.
- ✓ The change in seasonal temperature and precipitation may negatively affect the propagation of several plant species, which fail to adapt to new temperature and rainfall patterns and timing. This may lead to the extinction of certain plant species of Bangladesh.
- ✓ Changes in rainfall may impact on the agriculture production and breeding of local fishes.

**Learning and Instructional Materials:** Majority of the NGOs is providing information to the community about how ecosystem functions, why biodiversity is essential for our survival and how our

individual behavior can maintain healthy ecosystems. Advocacy & Campaign Networks are promoting solidarity attitudes and motivating members to make collective decisions and take responsible action together to address climate change challenges. In most cases, climate change related information is presented in simple and interactive way so that learners from different background can understand the contents. Participatory training with group-based learning approach also found helpful for delivering the technical contents of climate change.

Organization Type	Types of learning and instructional materials produced & used	Types of learning and instructional materials disseminates to the learners	Reason, if not disseminated
Advocacy & Campaign Network	Leaflet, Booklet, Policy Paper, Power Point Presentations, Teaching Modules, Training Manuals, Guidelines for Trainers, multimedia projection	Freely distribute all if they have resources	Often due to lack of financial resources they cannot manage to disseminate everything
Non-Governmental Organization (NGO)	Training Manuals, Handouts, Booklet, Policy Paper, songs, power point presentations, newsletters, Flip Chart, multimedia projection	Freely distribute all if it is funded by any project.	Sell tools that they produce by their own resources. It is also a way of fund generation.
Government	Leaflet, Booklet, Policy Paper, Case study,	Freely distribute	
University	Research paper, Books, Journal, Manual		

Learning and instructional materials include common environmental problems such as flood, salinity encroachment, deforestation, declining fish stocks, and land degradation to climate change. Majority of the organizations highlighted the need for repackaging climate change messages in ways that target learners can identify with and relate to daily environmental problems that they experience.

**Educators and Trainers:** Majority of the educators and trainers have Masters, M.Phil or P.hd degree holder from different disciplines with 3 to 24 years of experience. Many of them also have specialized training on climate change. NGOs tap Educators and Trainers from expert NGOs, Government, Universities.

Organization Type	Educators and Trainers			
	Educational Background	Experience (Years)	Involvement of external resource persons	Organizational Initiatives for capacity-building
Advocacy & Campaign Network	Masters, M.Phil or P.hd degree holder from different disciplines	10-15	NGOs tap resources from expert NGOs, Government, Universities for training.	Each organization sends their educators and trainers to attend seminars, conferences and trainings both at national & international level as key human resource development strategy.
Non-Governmental Organization (NGO)	Majority of the educators and trainers have specialized training on climate change. Few of them also have M.Phil or P.hd degree.	3 to 24	International experts are invited if needed	
Government	Masters/Post Graduate degree holder, Many of them have M.Phil or P.hd degree on specific issue	5 to 20	Sometimes international experts are invited	Government includes NGO representatives, media person and other experts in the official climate change negotiation team for capacity building. Government also sends officials abroad for specific training.
University	Masters/Post Graduate degree holder, Many of them also have M.Phil or P.hd degree	3 to 25	Sometimes Teachers from international universities are invited	University helps the fresh teachers to complete higher studies from international universities.

Each organization sends their educators and trainers to attend seminars, conferences and trainings both at national & international level as key human resource development strategy. University helps the fresh teachers to complete higher studies from international universities. Government includes NGO representatives, media person and other experts in the official climate change negotiation team for capacity building. Government also sends officials abroad for specific training.

## 2.5. Challenges, Needs and Contributions in Education/Training Works

None of the respondents reported any problem regarding the capacity of the educators and trainers. Nevertheless, everybody admitted that the currently available educators and trainers are much lower than the actual need. Resource constraints sometimes hinder appropriate planning. Since all the case study respondent organization has their own team and tools, they do not face difficulties for organizing trainings. Besides, involvement with different civil society networks also helps them sharing resource materials and trainers. The sharing between Government and Non-Government is not very common.

Name of the Organization	perceived effects/results or changes that happened due to the organizations education/training work on climate change				
	Target learners	Organization	Network	National Advocacy	International Advocacy
Advocacy & Campaign Network	Good	Good	Strong	Strong	Satisfactory
Non-Governmental Organization	Good	Good	Satisfactory	Strong	Notable
Government	Good	Good	Good	No Remarks	Good
University	Good	Good	No Remarks	Strong	No Remarks

### 2.5.1. Challenges for promoting climate change education in Bangladesh

The scoping study identified lack of capacity on participatory, experimental, and inclusive teaching and learning methodologies and lack of quality training facilities are the key challenges for promoting climate change education in Bangladesh. A major problem faced by the grassroots NGOs/CBOs is lack of appropriate and timely information on climate change and its possible adverse effects, so that they are not getting the scope to create climate change awareness among the communities. Participants take time to understand some technical issues like General circulation models, Regional climate models, NAPA, NAMA. At present, no institutional or formal knowledge of the environmental education reaches to the rural people of the country.

Organization Type	Challenges that organization faces on climate change education/training courses/advocacy/activities			
	designing challenges	Challenges concerning participants	Educational/Training Management	development of curriculum & instructional materials
Advocacy & Campaign Network	Updated scientific & conceptual materials are sometimes not available		Lack of adequate financial resources to purchase or provide materials to the participants.	Inadequate financial resource Lack of reference materials on specific sectors, for example agriculture, water
Non-Governmental Organization (NGO)	Do not face problem, participatory planning approach helps.	Participants take time to understand some technical issues	Inadequate facilities and lack of human resources	Lack of reference materials Limited documentation of practical examples from the field Fund constraints/Limited budget
Government	Do not face problem			Do not face problem
University	Resource constraints sometimes hinder appropriate planning		Lack of experienced management personnel	

### 2.5.2. Urgent needs for education/training and advocacy on climate change

Organization Type	Need Assessment for education/training and advocacy on climate change				
	Educational/training Needs		Capacity building needs		
	courses or topics	Resource materials	educators and trainers	target learners	perspectives in viewing environmental concerns, climate change
Advocacy & Campaign Network	Very Much	Moderate	Not Much	Very Much	Minor
Non-Governmental Organization (NGO)	Very Much	Very Much	Very Much	Very Much	Moderate
Government	Moderate	Minor	Moderate	Much	Not Much
University	Moderate	Moderate	Not Much	Much	Not Much

Simple and non-technical pictorial catalogs, animations video or audio comics showing the complex inter-relationship(s) that exists between the natural environment, the social environment, and climate change is urgently required for the grassroots NGOs/CBOs.

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### ***Organizational initiatives for popularizing climate change and environmental education***

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#### **Coastal Development Partnership (CDP): *Safeguarding Local Knowledge & Traditional Wisdom for Climate Resilient Community Development***

CDP has been actively monitoring and participating UNFCCC process since 2003 and day to day information collection culture of the organization always keeps CDP update on climate change. CDP translates global & national policy issues into local language and popularize theoretical & scientific aspects of climate change and environmental knowledge to the illiterate people in non-technical ways using cultural tools like drama, songs. CDP also trains young girl students to disseminate the knowledge to the women and girls in their own community. Tutu Training & Resource Center or TUTU Center (former CDP Central Information Center) in Khulna is a well-reputed Climate Change Resource center for the development stakeholders in Bangladesh. The TUTU Center has been clipping year wise information on more than 100 of issues from 7 local and 7 national newspapers from the very beginning of its inception in 1997. Also 12000 books, booklets, magazines, journals, reports, research papers etc has preserved in the TUTU Center. CDP have always had a role as information provider to the media & grassroots NGOs, students, researchers about biodiversity conservation, ecosystem management, environment friendly development, climate change and humanitarian issues and TUTU center safeguarding that tradition. CDP works are acknowledged in UNFCCC Database on local coping strategies.

#### **Campaign for Popular Education (CAMPE): *Thousands are together with one voice “Education for All”***

CAMPE is the coalition of more than 1000 organizations. This coalition has been working to promote environmental education at grassroots level since 1998. The coalition played a role to include climate change in national education policy. CAMPE is affiliated with the Federation of NGOs in Bangladesh (FNB), Asian-South Pacific Bureau of Adult Education (ASPBAE) and International Council of Adult Education (ICAE). It is an elected member of the Board of Global Campaign for Education (GCE), a worldwide network of NGOs and teachers unions operating in more than hundred countries. It is recognized by UNESCO as a nodal institution for basic education in Bangladesh.

#### **Bangladesh Poribesh Andolon (BAPA): *Nurturing the energetic environment movement in Bangladesh***

As a result of its ten years of sincere work, BAPA has now emerged as a preeminent citizens' organization of the country, extending its work from the capital to remote corners of Bangladesh. Very few developing countries can claim having such a vibrant nationwide environment movement. As a result of the work by BAPA, other pro-environment organizations of the country, and steps taken by the government, it has been possible to achieve some significant successes. Among these are (i) introduction of unleaded gasoline in place of leaded gasoline, (ii) elimination of two-stroke engine vehicles from major cities, (iii) re-imposition of the ban on the use of polythene bags, (iv) demolition of many encroaching structures from the shores of the River Buriganga, (v) enactment of the law on protection of surface water bodies; (vi) introduction of low-cost methods for removal of arsenic from drinking water, etc.

#### **Bangladesh Environmental Lawyers Association (BELA): *Promoting public interest litigation in Bangladesh***

The efforts of BELA through public interest litigation have truly sensitized the concept of 'environmental justice' in the country that now has special courts to deal with environmental offences. For its contribution in the field of environmental education and awareness, BELA received the Environment Award in 2007 from the Government of Bangladesh. In 2003 BELA has received the Global 500 Role of Honors of the United Nations. As a member of the Environmental Law Alliance Worldwide (E-LAW), BELA hosts the E-LAW, Bangladesh office.

#### **Bangladesh Centre for Advanced Studies (BCAS): *Advancing sustainable development for the 27 years***

Bangladesh Centre for Advanced Studies and the Independent University, Bangladesh teamed up with the International Institute for Environment and Development for establishing the International Centre for Climate Change Adaptation and Development (ICCCAD) in Dhaka, Bangladesh. The ICAAAD is running short courses on disaster risk reduction, climate change adaptation and mitigation linkages, economics of adaptation, community based adaptation, and the clean development mechanisms. At the National level, BCAS has spearheaded and initiated numerous activities, along with others, including the National Environment Management Action Plan (NEMAP) Programme, Sustainable Environment Management Programme (SEMP), National conservation Strategy (NCS). At the International level, BCAS is involved in a number of collaboration research, policy analysis, advocacy including North South Dialogue (NSD) on Climate Change, Global Compact Initiative under the aegis of UN as RING number.

### ***2.5.3. Education for Sustainable Development (ESD) challenges in Bangladesh***

The performance of Bangladesh Government to promote public awareness of and wider participation in the UNDESD (The United Nations Decade of Education for Sustainable Development, 2005-2014) as per the adoption of the United Nations General Assembly resolutions 59/237 are not satisfactory. In Bangladesh, there are some scattered efforts are found and there is no formal data base to know the ESD initiatives taken by different organizations. Bangladesh National Commission for UNESCO is mainly facilitating ESD in Bangladesh but their activities are limited within a few organizations. Dhaka Ahsania Mission (DAM) in partnership with ACCU-UNESCO ESD programme has developed and published several teaching learning materials to promote ESD issues at different levels but not sufficient enough to cater the needs of the grassroots level. Experts commented that ongoing donor approach for commissioning big NGOs has failed to generate ownership the ESD process among the grassroots NGOs who receives sub-contract from the big NGOs. They opined that network-based approach would assist grassroots NGOs to promote ESD with better coordination and ensure more transparency & accountability as well as cost-effective in terms of overhead/administrative costs.

Unfortunately, majority of the NGOs whose works are mainly climate change or environmental focus, do not have adequate expertise to integrate climate change and Education for Sustainable Development (ESD). Most of the NGOs know that the UN Decade of Education for Sustainable Development (UNDESD) began on January 1, 2005. However only a few knows that the aim of the UNDESD is to promote education as a basis for a more sustainable society and to integrate sustainable development into education at all levels and all areas of life including communities, the workplace and society in general.

Bangladesh has not yet started integrating Education for Sustainable Development (ESD) into all relevant curricula from primary education to tertiary education. One of the key obstacles to Education for Sustainable Development is teacher knowledge and understanding, because of the lack of pre- and in-service teacher training in Education for Sustainable Development.

### ***2.6. Networking Initiatives on Climate Change and Environment***

The scoping study respondents reported Bangladesh Poribesh Andolon (BAPA), Campaign for Sustainable Rural Livelihood (CSRL), Bangladesh Campaign against Climate Change (BCCC), Climate Change Development Forum (CCDF), and Campaign for Popular Education (CAMPE) as the known networks. These networks organize national & local level training & workshops for the members and also provide information to the members to carryout climate change advocacy and awareness raising activities.

Climate Action Network (CAN), Peoples Movement on Climate Change (PMCC), Climate Justice Now (CJN), 350.org, Peoples' Action on Climate Change (PACC), Third World Network (TWN), Global Campaign against Climate Change (GCCC), Environmental Law Alliance Worldwide (E-LAW), Earth Day Network (EDN), IUCN-the World Conservation Union & South Asian Watch on Trade, Economics

and Environment (SAWTEE) are the key international networks are working with their member organizations in Bangladesh on climate change. These networks maintain communications with climate change updates, and provide scope to participate in international level movements, trainings and conferences on the climate change issues.

Personal relationship and organizational relationship plays the key factor for developing linkage with the international networks. Bringing International solidarity movements into local and national level activities is recognized as one of the key reasons for global network partnership. Internet is the key tool for communication with the international networks.

The network friendly attitude prevails in most of the organizations in Bangladesh, specially on policy advocacy, training and education related issues. Majority of the organizations are more focused on strengthening the existing networks, streamline more on different climate change issues than forming new networks. However, they are open to any networks which may fill the current gaps and appropriate with their mandate.

More than two-third organizations (70.0%) expressed their willingness to be involved in our work at CLIMATE Asia Pacific which hopes to link up education and capability building efforts in addressing peoples' vulnerability to climate change.

Interest to involve with CLIMATE Asia Pacific	N	%
No	4	6.7
Not sure yet	14	23.3
Yes	42	70.0
<b>Total</b>	<b>60</b>	<b>100.0</b>

Perceived ways of contribution to efforts to strengthen the region's capacity to address climate change	N	%
Campaign and advocacy	10	23.8
Mobilizing local communities	4	9.5
Networks building	3	7.2
Voluntary work in rural areas on behalf of the CLIMATE Asia Pacific	11	26.2
Awareness & capacity building to reduce climate change vulnerability	14	33.3
<b>Total</b>	<b>42</b>	<b>100.0</b>

Among the organizations who reported to be involved with the CLIMATE Asia Pacific, they are mainly willing to contribute in Awareness & capacity building works to reduce climate change

vulnerabilities (33.3%), Voluntary work in rural areas on behalf of the CLIMATE Asia Pacific (26.2%) and Campaign & advocacy (23.8%).

The following key concerns and issues on climate change are generally raised with the networks and partner organizations in Bangladesh:

- ✓ Climate Change is not restricted to national boundaries and we have to be united to tackle the climate risks.
- ✓ Rich Nations and Rich people have to take more responsibilities to reduce carbon emissions because carbon dioxide from the combustion of fossil fuels from cars, power plants, and factories accounts for about two thirds of the human induced warming effect. An estimated 1.6 billion people in developing countries do not have access to electricity and do not enjoy modern energy services.

- ✓ Developed Industrialized nations have historical responsibility on carbon emissions because since the industrial revolution in the 1850s, carbon dioxide in the atmosphere has increased by more than 30%, methane by more than 150%, nitrous oxides by 17% and ozone by 35%. The average surface temperatures have increased by 0.3 to 0.6<sup>0</sup>C since the late nineteenth century. The global average temperature is expected to increase by about 0.2<sup>0</sup>C per decade over the next two decades<sup>11</sup>. Developing countries should come forward with their historical responsibilities and show their sincere commitment.
- ✓ Social movement within the country is needed to save the poor women & children because the rich people may cope with climate shocks through insurance or savings, by selling off assets, but the poor may have no alternative except to reduce nutrition, take children out of school, or sell the productive assets on which their recovery depends. Women and children are most vulnerable to hunger related deaths and illness, which would be exacerbated by climate change through increasing food and water shortages.

The scoping study identified that there is no formal network particularly focused on climate change education or even ESD, though many organizations or networks addressing ESD as an important component. Any network on the Climate Change Education for Sustainable Development (CCESD) could fill that gap. The scoping study respondents reported the following reasons for the lack of networking initiatives on climate change both at national & global level:

- a) Lack of trust and transparency
- b) Lack solidarity
- c) Lack of commitment
- d) Lack of long-term thinking and planning initiatives
- e) Limited scope of funding on training, research & education focused activities by the network partners
- f) More attention on donor-driven project based network development approach
- g) More focus on adaptation based initiatives
- h) Lack of communication and activities often keeps the existing networks dormant
- i) Existing funding mechanisms often do not promote quality organizations; rather stick with the existing partner organizations

There is also a need for quality rather than mere quantity in higher education as Bangladesh's research productivity and international competitiveness are embarrassingly low. Much of this can be attributed to lack of advanced research equipment and some contemporary technologies, and inadequate numbers of full time researchers such as PhD students and postdoctoral fellows. Government and other academic institutions are jointly & individually conducting some research and infrastructural project in terms of addressing of climate change issue in Bangladesh.

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<sup>11</sup> IPCC, 2007: "Fourth Assessment Report (AR4)", Intergovernmental Panel on Climate Change (IPCC), 2007

## 2.7. Country-level and Global Initiatives in Responding to Climate Change

**National responses or initiatives to Climate Change:** Bangladesh Government is the chief initiator in responding to climate change both at national and global level. The Government has developed Bangladesh Climate Change Strategy and Action Plan (BCCSAP -2009) to guide the national initiatives on climate change until 2018. With a view to the uncertainty about timing and magnitude of the likely impacts of climate change, the BCCSAP is designed as a living document which anticipates periodical revision, as required. The Bangladesh National Adaptation Programme of Action (NAPA) also gave importance on education, training and public awareness and identified this as an immediate and urgent need for adaptation to climate change. Bangladesh Government has recently approved the Disaster Management Policy-2010 which is still under process for risk reduction activities. The issue of climate change has been recognized in the National Water Management Plan and National Strategy for Economic Growth, Poverty Reduction and Social Development.

Ministry of Environment and Forest and Department of Environment is dealing climate change issue as a broader environmental issue and the Official Focal Point of the United Nations Framework Convention on Climate Change (UNFCCC). The major thrusts from the government on climate change issues are observed in the management of climate change fund, river dredging, climate center development, technological up-gradation of the early warning system and lobbying for access to international funds for climate change adaptation.

Many international organizations are responding to climate change according to their priority with local and national NGOs, CSOs and academies. CSOs and NGOs are conducting some awareness, research and advocacy program in the field both in integrated and nonintegrated approach. NGO initiatives are focused on building community-level adaptive capacity to reduce climate change risks that communities face. Most of the NGO projects have an awareness component for educating people about the potential threats that may occur in the near future. NGO initiatives revealed that in rural areas of Bangladesh, where televisions and radios are rare, cultural activities can draw attention of larger audiences and can be an effective way to disseminate information.

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### Climate Change Education: The Gateway to the Global Climate Justice

The developed countries need climate education more than the developing countries. Because they do not understand the principle of historical responsibility, principle of polluter pays and even food security. What is more alarming for us that they are now after the land of the developing countries so that they can run their cars with biofuel.

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**Global initiatives or responses to Climate Change:** United Nations Framework Convention on Climate Change (UNFCCC) is the key global mover of the climate change. Inter-governmental organizations and many networks of international non-governmental organizations have been showing more commitment than the leaders of the Developed countries to implementing the UNFCCC. Different UN bodies, IPCC, Donor organizations and few advocacy & campaign networks. The developed countries who are mainly responsible for escalating the global climate problem, have agreed to provide a big adaptation and compensation fund for the least develop countries through the UNFCCC, which is still unimplemented.

## 2.8. Critical reflections on the Initiatives in Responding to Climate Change

Many civil society representatives and NGOs have expressed their discontent that government is more focused on receiving climate change adaptation fund from the international level and such approach allows the international donors & bureaucrats to influence more than the mass people of the country. Government is looking after some big fund and loan in terms of reducing climate change vulnerabilities before setting up the fund management principles and ensuring of transparent disbursement of climate fund for the affected people.

Advocacy & Campaign networks reported that government & NGOs both talks much than works which is often contradictory and providing too much attention to raising money for climate change projects. Women is yet virtually absent in the Climate leadership at all levels; whether it is local, national or international. Most of the information about climate change is presented in a form designed to reach specialists, and not to address ordinary people in their own terms. Everybody is talking on adaptation but mitigation has not received the deserved attention. Both adaptation and mitigation requires similar treatment and policies should also adjust accordingly. Nevertheless, before that priority stakeholders have to understand the concepts clearly.

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### ***Box-2: Climate Change Education is needed for promoting Good Governance & Climate Justice in Bangladesh*** *A case study on Climate Change Trust Fund (CCTF), Government of Bangladesh*

Recently climate experts, development experts and the civil society members criticized that government has failed to maintain transparency and accountability in managing the climate fund formed with taxpayers' money. Questions were also raised by the development actors about efficiency of many of the 53 organisations selected by the Climate Change Trust Fund (CCTF). Climate experts have also raised question regarding the government approach & criteria on project selection because government is raising fund for urgent adaptation and it was reported that the selected NGOs will implement adaptation projects. However, among the selected NGOs, 27 will implement mitigation and low carbon development projects. Under the Climate Change Trust Fund the Ministry of Environment and Forest finalized setting-up of a separate unit 'Climate Change Unit-CCU' which will made responsible for ensuring efficient implementation of the projects/programmes undertaken by other ministries, departments and NGOs. Recently after that incidence, the international adaptation fund board has rejected Bangladesh's proposal to consider the Ministry of Environment and Forest as the national implementation entity. The Ministry of Environment and Forest is not a major fund managing ministry like the Ministry of Planning or Finance.

The government has halted the process of disbursing climate change adaptation fund to non-governmental organisations following allegations of nepotism in selecting the NGOs. The Parliamentary Standing Committee on Environment and Forests in a review found that the selection process was not transparent and the selected NGOs lacked experience to produce the outcomes and outputs targeted in the project proposals. The committee recommended re-evaluation of the project proposals and prepare a fresh list of implementing NGOs. Climate change activists welcomed government decision and suggested that government should have a good procedure for selecting and monitoring the projects. They should make available everything on their website. All the proposals of the projects should be made public. The list of the selected projects should also be published so that everybody can see who applied and who got the money.

The case study envisages that if the leading government agency fails to demarcate adaptation and mitigation projects, then how government will serve the climate vulnerable people in Bangladesh. Besides, this case also demonstrated that climate governance needs strong active participation from policy maker. The Parliamentary Standing Committee on Environment and Forests showed encouraging aspects of climate governance and highlights the need to arrange climate justice training for policy makers. Climate change experts suggested to the government for taking measures to introduce climate change related courses in universities that is absent now. This will help for creating manpower for both government and NGOs to execute the climate change projects in the coming days.

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## 2.9. National & Global Policies on Climate Change Education/Training Works

All the institutions involved with the study know about the Intergovernmental Panel on Climate Change (IPCC). However, it does not reveal the real picture because two-thirds of the interviewed institutions are actively involved with the United Nations Framework Convention on Climate Change (UNFCCC) process.

<b>Global Policies/Background Materials on Climate Change Education</b>		
<i>Intergovernmental Panel on Climate Change (IPCC) Working Paper</i>	<i>Decade of Education for Sustainable Development</i>	<i>Chapter 4 Letter C on Capacity Building, pp. 21-22 of the Climate Change Negotiation Document</i>
<b>Aware</b>	<b>Aware (75%) / Partly Aware (25%)</b>	<b>Aware/ Partly Aware</b>

All the respondents have articulated that majority of the institutions & mass people in Bangladesh are mainly familiar with the name of the Intergovernmental Panel on Climate Change (IPCC).

<b>National Policies/Background Materials on Climate Change Education</b>		
<i>Bangladesh Climate Change Strategy &amp; Action Plan 2009</i>	<i>Climate Change in National Education policy 2010</i>	<i>Bangladesh National Adaptation Programmes of Action (NAPA)</i>
<b>Aware</b>	<b>Aware (75%) / Partly Aware (12.5%) / Not Aware (12.5%)</b>	<b>Aware</b>

On March 21, 2010, Bangladesh government approved the National Education Policy, 2010 introducing several compulsory subjects to primary and secondary levels of general, madrasa and vocational education in order to establish a unified schooling system. The policy seeks to bring all students of the country, irrespective of their religions, genders, physical limitations, socio-economic and geographic locations under one system.

### **Climate Change Cell (CCC): Potential for Promoting Climate Change Education within the Government** *Department of Environment (DoE), Ministry of Environment and Forest, Government of Bangladesh*

To address current impacts and manage future risks of climate change and variability at all levels in all stages toward a climate resilient Bangladesh, the government has established the Climate Change Cell. The Cell provides the central focus for the Government's climate change related work, operating as a unit of the Department of Environment (DoE). Its objective is to enable the management of long term climate risks and uncertainties as an integral part of national development planning. Development and application of a research Strategy for Climate Change and Adaptation for Bangladesh is one of the major activities of Climate Change Cell. Climate Change Cell supports adaptation research to find options for climate risk management and adaptation through facilitating demand driven research identification and implementation. The broader user community shall access these results in planning their sectoral or any level planning. Climate Change Cell also documents good practices in risk management and adapting to climate change to promote replication as option to CRM and adaptation. Climate Change Cell supports professionals serving in various official positions in government ministries, departments, directorates, agencies and organizations.

### **Institute of Education and Research (IER), University of Dhaka** **Potential for preparing competent professionals on Climate Change Education**

The Institute of Education and Research (IER), University of Dhaka is the oldest and biggest institution for the study of Education in Bangladesh. It is the only institution of its kind in Bangladesh which offers teaching programmes leading to higher degrees, conducts research studies and provides extension services in Education. It prepares manpower for major specialized areas of education and renders services for the development of Education as a whole. The IER was established as the first Institute of the University of Dhaka in 1959. The degrees offered by the Institute are four year Bachelor of Education (Honours), one year Master of Education, Evening Master of Education, two year M. Phil and Ph.D. With the aim of preparing competent professionals for different specialized areas of Education, IER restructured its departments. Now M. Ed. and M. Phil programmes are offered under the ten departments.

At the higher-level studies, duration of all degree courses has been made four years instead of the previous three years. The new policy has put emphasis on climate change from primary to higher education level. National Text Book Board has introduced environmental science topics from 3<sup>rd</sup> grade students. The environmental science book for the 5<sup>th</sup> Grade Students included a chapter on weather and climate.

## 2.10. Global & National Perspectives of Future Climate Change Issues

The institutional & knowledge gaps are noticeably big though many organizations in Bangladesh are well connected with global climate change policy processes. The challenging task, however, is to develop an education system and curriculum that equip learners with the requisite skills knowledge and attributes to deal with the challenges. To mitigate or halt the adverse effects of Climate Change, human beings have to be taught appropriate attitudes and competencies to deal with the situation. This can be achieved through a well formulated and targeted climate change educational curriculum incorporating the goals of education for sustainable education.

The scoping study recognized that Article 6 of the UNFCCC and Article 10(e) of the Kyoto Protocol which call on governments to address climate change education, training and public awareness issues relating to climate change, have not received the deserved attention at national level. Besides, majority of the institutions acknowledged that they have not critically explored the linkage between climate change education and the Article 6. One organization acknowledged the difficulties to identify the explicit linkage between UNFCCC and climate change education.

Priority Projects on Education and Capacity Building included in Bangladesh National Adaptation Programmes of Action (NAPA)	Sector Component	Order of Project Priority
Capacity building for integrating Climate Change in planning, designing of infrastructure, conflict management and land-water zoning for water management institutions	Capacity building	3
Climate change and adaptation information dissemination to vulnerable community for emergency preparedness measures and awareness raising on enhanced climatic disasters.	Awareness raising & Capacity building	4
Inclusion of climate change issues in curriculum at secondary and tertiary educational institution.	Education	7
Development of eco-specific adaptive knowledge (including indigenous knowledge) on adaptation to climate variability to enhance adaptive capacity for future climate change.	Education and Public awareness	9

Bangladesh government has to undertake widespread educational and public awareness programs and also devise mechanisms to ensure public access to climate change information following the Article 6 of the UNFCCC. Although Bangladesh National Adaptation Programme of Action (NAPA) incorporated this need, the progress is inadequate in terms of total population of the country.

### Box-3: Poor ICT Infrastructure act as major barrier for promoting climate change education

The UNFCCC has established a web portal, the Climate Change Information Network (CC:iNet) to provide rapid and easy access to information that governments, organizations and individuals can use to promote education, training and public awareness on climate change. However, due to limited internet coverage, rural communities, grassroots NGOs and Schools do not have the scope to capitalize such public information resources. The underlying aim of the Climate Change Information Network (CC:iNet) is to support the Article 6 of the UNFCCC, which allows the Convention to develop and implement educational and training programmes on climate change.

The Intergovernmental Panel on Climate Change (IPCC) and the World Bank (2008) have identified two major actions or mechanism for dealing with Climate Change: (1) Adaptation and (2) Mitigation actions. But not education though achieving any measure of success with the adaptation and mitigation actions, depend on education.

Various government departments, agencies and research organizations are expecting to implement different projects, which are disaster tolerant paddy, wheat and oil seeds production, processing and distribution project, river re-excavation project in Manikganj, capacity building of the Ministry of Environment and Forest, safe water, sanitation and improvement of bio-gas technology, improvement of water and sanitation in flood prone areas and coastal embankment retention and River bank protection project with the support of UNDP, FAO, GEF, DFID, NORAD, USAID, Sida, AusAID and EU.

Name of the Organization	Environmental and/or Climate Change issues that should be addressed in the future	
	At Global Level	At National Level
<b>Civil Society Network</b>	1. More effective & strong UN leadership to address mandatory carbon emission reduction for all countries following the follow the principle of historical responsibility	1. Education & Awareness Materials development to popularize climate change issues
<b>Non-Profit Non-Governmental Organization</b>	2. Rigorous mitigation efforts to reduce greenhouse gas with legally binding targets. Intensive monitoring along with the provision of penalty is also required for the committed countries. The required financial & technical support for the poor countries has to be ensured 3. Context of Justice in terms of cause, consequences, responsibility, efforts and global and national policy interventions 4. Global environmental movements to protect and ensure compensation for the poor countries 5. Highest efforts to enact multilateral environmental agreements & treaties 6. Polluter pay principle should be enforced at global level. 7. False market based solutions that violates food sovereignty has to be stopped and Pro-poor climate governance & policy development process should be promoted.	2. Training for specific target groups 3. Enactment of national environmental laws, rules & regulations 4. popularization of the climate change issues among the mass people 5. Supporting communities and people in rural areas to strengthen their resilience and adapt to climate change. 6. Integration of local knowledge with climate governance & policy issues 7. Create opportunities for young people to learn more about climate change
<b>Government</b>	8. Develop countries should provide their committed financial & technical support for the poor countries	8. Introduction of environmental education at primary school involving non-government agencies, as well as local communities
<b>University</b>	9. More collaborative research between Northern & Southern Universities	9. Special research institution should be developed to develop capable human resources

Climate Change Education for Sustainable Development (CCESD): Core Issues for Bangladesh	
Issues	Examples
<b>Information and Awareness</b>	Non-Formal Climate Literacy for Women
<b>Integration of Climate Change Knowledge with Traditional Wisdom</b>	using local and indigenous knowledge to explain climate change perspectives
<b>Solidarity, Peace and Equity for addressing social challenges with changing climate in Local Context</b>	Conflict resolution, Collective farming, community Food Bank, women empowerment, community-driven development approach towards sustainable livelihood, habitat, water, sanitation,
<b>Sustainable Green Economy</b>	sustainable production, distribution and consumption, Recycling
<b>Climate Resilient Educational Governance</b>	Climate Resilient Educational Infrastructure Development, Integrating Climate Change policy issues & frameworks with Education strategies and policy implementation
<b>Culture</b>	Diversity and intercultural tolerance; Solidarity Society
<b>Curriculum for Climate Change Education</b>	Introduction to Climate change Implications of climate change to people's livelihoods and the world The causes of global warming and projections under different scenarios Adaptation to climate change and climate change mitigation Sustainable use of natural resources (forestry, fisheries, land use, Water resources), energy efficiency of education facilities
<b>Curriculum Climate Change Education for Sustainable Development (CCESD)</b>	The need for reduced carbon emissions The need to maintain biodiversity & ecosystems Options available to adapt to the adverse effect of climate change Climate Change policy issues & frameworks Climate Resilient Development; Education for Sustainable Development Biodiversity conservation, Ecosystem Protection, Forestry Agriculture, Energy, Health; Coastal development and management
<b>Academic Degree</b>	post-graduate studies on climate change adaptation and mitigation, vocational training on renewable energy & agro-forestry, professional training for climate-related negotiations in international forums; Climate Literacy Certificate Course for NGO Field Workers

# Chapter 3

## Conclusions & Recommendations

### 3. Conclusions

Climate Change has already emerged as the major social, economic and environmental challenge for the Bengal society. The study findings envisaged that climate change issues should not be addressed in isolation as an environmental, social or development related issue and climate change education could provide a potentially very powerful mechanism to holistically address climate change like adaptation and mitigation.

The United Nations Decade for Education for Sustainable Development (DESD 2005 - 2014) has reached its mid-point but Bangladesh is still at the early stages of implementing *Education for Sustainable Development* (ESD). Since Climate Change Education (CCE) and Education for Sustainable Development (ESD) are new concepts for the grassroots stakeholders, the key challenge will be to find the ways for integrating important principles of ESD into climate change education. Without ESD, development of culturally appropriate and locally relevant educational material for Climate change will remain a big challenge.

Climate Change Education for Sustainable Development (CCESD) is about the development of Climate Resilient capacity- thus increasing the abilities of individuals, groups or organizations to address opportunities, risks or vulnerabilities associated with climate change. Climate change education should be part of an education for sustainable development. Because it helps people to develop the attitudes, skills and knowledge to bring about the changes in attitudes and lifestyles needed to tackle climate change as well as to make informed decisions for the benefit of themselves and others, now and in the future - and to act upon these decisions.

The nature of the climate change is interdisciplinary both in terms of methodological aspects and the mix of scientific and social science elements. Therefore, climate change education has to be interdisciplinary integrating knowledge from society, science, nature, economy and culture. CCESD should also include various International Conventions and Protocols surrounding climate change. The recommended teaching and learning methods should be lectures (including guest lecturers from GO & NGO practitioners), seminars, group discussions, visits to sites demonstrating the impact of climate change and or adaptation and mitigation work in progress, field discussions and surveys.

The UN leadership has to be more effective and strong to address the global climate challenge. The emitter countries must follow the principle of historical responsibility and show their commitment for the climate victim countries, especially to support developing countries like Bangladesh with finance and technology for climate change education. The carbon emission reduction according to national emission limit has to be mandatory for all countries. Polluter pay principle should be enforced at global level and False market based solutions that violates food sovereignty has to be stopped. The developed countries need climate education more than the developing countries. Because they do not understand the principle of historical responsibility and principle of polluter pays.

### 3.1. Recommendations

**Climate change education is urgent for preparing future generations towards a zero-emissions world:** Awareness or understanding climate change is not adequate to survive in the changing climate, rather more actions are required to accelerate the progress. We need specialized climate change education for taking actions to solve real-life problems linked with climate change. The process of the greening carbon-addicted economy both at global and national would not be accelerated without qualified climate professional and such process require a specialized & professional education like Climate Change Education for Sustainable Development (CCESD) to facilitate the multi-disciplinary team. CCESD is not for discussing the whether a scientific statement is true or false, rather to test the reliability, analyze context to make science more connected to real-life problems. Climate Change Education for Sustainable Development (CCESD) will help today's learners to understand what future may look like and how we should respond to the changing climate. Climate change education for adaptation has to prepare for uncertain futures that hold both risks and opportunities. Climate change education for mitigation should make people aware of the damage caused to the climate by increased greenhouse gas (GHG) emissions, as a result of unsustainable consumption lifestyles, and should offer alternative, more sustainable solutions. The goal of the climate change education is to preparing future generations to transform our societies towards a zero-emissions world and establishing a Climate Smart Culture, where:

- ✓ *renewable energy resources (solar, wind) has replaced emission generating fossil fuels (coal and oil)*
- ✓ *all waste is recycled*
- ✓ *principle, Polluter pays principle & Precautionary principle are key governance tools for ensuring ecosystem protection, social justice and equity*
- ✓ *Education & learning's are connected to real-life problems/ real-life examples*
- ✓ *women have equal access to resources and opportunities*
- ✓ *markets & economy is guided by the environmentally friendly production, distribution and consumption of goods and services*
- ✓ *every generation is reducing their greenhouse gas emissions, waste and pollutions than their previous generation*
- ✓ *Learning materials, teacher training, teaching methods, extracurricular activities serve the special needs of the student with disabilities.*

**Piloting a model One-Stop Support Center for Mainstreaming Climate Change Education for Sustainable Development (CCESD) in Bangladesh:** Development/implementation of education & training programmes focused on climate change is yet at budding stage in Bangladesh. Mainstreaming CCESD requires dedicated funding for the training of human resources, developing educational tools & curricula, technological support for the person with disabilities, which is so far virtually non-existent in Bangladesh. Since it may take time, meanwhile One-Stop CCESD Support Center stakeholders can start a multi-stakeholder monitoring forum to monitoring the progress of integrating climate change into ESD process, popularize CCESD through campaigns and identify which key stakeholders are yet to be involved in CCESD process in Bangladesh. If the support center has an audio-visual unit, it can also ensure the availability and easy access of climate change education material in digital format with local language for the schools, youth clubs and community learning centers in remote areas. Climate Change Education and training should be done by the collective efforts of the government and private/non-government with transparency and ethics.

**Mainstream climate change in professional development courses across academic disciplines:**

Although Bangladesh has been in the forefront of awareness raising on adaptation and on-the-ground adaptation research, the knowledge and information generated remains scattered. The lack of climate change information about the nature of change with locally variable impacts breeds uncertainty, preventing rural poor people and their supportive stakeholders from making the critical decisions that are necessary to adapt. General short course on “Climate Literacy” for policymakers, journalists, NGOs and Business sector need to be introduced. Professional development courses should also develop a strategy for university-civil society engagement in which university students would do needs-based research with NGOs and local communities, NGOs and other groups would present their perceptions of problems/opportunities and constraints to university researchers. Training together higher education will provide the technical skills and advanced knowledge needed by climate change professionals.

**Introduce Non-Formal Climate Change Education for rural communities to strengthen their resilience to climate change:**

The popularization of the causes of the climate change and other core issues at national level is required. Along with international efforts, national, social and individual responsibilities need to be more proactive and existing policies should be harmonized in accordance with the climate change context. The national government should not keep them busy only for collecting international funds to address climate change, rather put more emphasis on developing strong international solidarity among small, poor & island countries. Non-formal education programmes on climate change can be enhanced through media, networking and partnerships.

## Annex-1

## Respondent's information for Questionnaire Survey on behalf of the Organization

SL No.	Name of the Respondent	Name of Org. /Institution	Address	Telephone	Email address	Name of CEO
01.	Md. Jahangir Alam	Association for Community & Agriculture Development (ACAD)	Lalmonirhat	0591-61027, 01716-862081	Jahangir_acad@yahoo.com	Md. Jahangir Alam
02.	Feroz Ahammed	Alo Shechcha Shebi Polly Unnayan Sangstha	Kushtia	01711-284646	alokushtia@gmail.com	Feroz Ahammed
03.	Aminur Rahman Tuku	Amena Khatun College	Jhenidah	01716020501	N/A	
04.	Ferdowsi Begum	APANJAN (Aponjan Nari-O-Shishu Unnayan Shangstha)	Jhenidah	01712032378	aponjan-Jhned@yahoo.com	Ferdowsi Begum
05.	M D : Anuar Hassoin	ASEA	Jhenidah	0173669160	N/A	M D : Anuar Hassoin
06.	Mst. Jannatul Ferdous	Asthha Women & Child Development Organization	Jhenidah	01710448026	N/A	Mst. Jannatul Ferdous
07.	Saeedul Islam	Bangladesh Centre for Village Development (BCVD)	Dhaka	88-02-8154749, 01711-186457	bcvd04@yahoo.com	Mohammad Mottakin
08.	Abdul Mannan_Sarker	Dhaka_Presidency High School	Dhaka	02-9111009	N/A	Abdul Mannan_Sarker
09.	Manjur Morshed Khan	Coastal Health Advancement & Nutrition Center (CHANCE)	Barguna	01712934035, 01822982283, 0448-62988	chance_org@yahoo.com	Manjur Morshed Khan
10.	Md. Abdul Jalil	CHETANA	Satkhira	01716-211772	N/A	Md. Abdul Jalil
11.	Ruhul Quddus	Climate and Natural Resource Research Forum of Journalist (CNRRJ)	Dhaka	01199039786	cnrrj10@yahoo.com	Ruhul Quddus
12.	S. M. Salim Bulbul	CONSCIENCE	Khulna	+88-041-732030	cons_org@khulna.bangla.net	S. M. Salim Bulbul
13.	Md. Mashur Rahman	Development of Economics & Human Resource Foundation (DEHF)	Khulna	01720554440	dehf_organ@yahoo.com	Md. Mashur Rahman
14.	Md. Ilias Sikder Forhad	Development of Economical & Social Center (DESC)	Jhalakati	01712 133 461, 01934 356 855, 01712 342 794	forhad.desc@yahoo.com	Md. Ilias Sikder Forhad
15.	Roaza Jagadish Tripura	Legal Aid & Research Advancement (LARA) Foundation	Khagrachari, CHT	01556620074	lara_cht@yahoo.com	Roaza Jagadish Tripura
16.	Mrs. Mita Boiragi	DHORITRY Samaj Kallyan Shonghta	Bagerhat	01712613606	dhoritry@khulna.bangla.net	Mrs. Mita Boiragi
17.	Prokash Chandra Dhar	Dipshika Sangstha	Jessore	01722503998	prokashdss@yahoo.com	Prokash Chandra Dhar
18.	Md. Mizanur Rahman	Dipaon Samaj Kallayan Sagnstha	Jhenidah	01712741620	N/A	Md. Mizanur Rahman
19.	M. Zahid Hossain Khan	GDS-Grameen Development Society	Barisal	8804312176528	gdsbsl@gmail.com	M. Zahid Hossain Khan
20.	Dr. Ranjit Kumar Biswas	Gano Milon Foundation (GMF)	Bagerhat	01711814196	N/A	Dr. Ranjit Kumar Biswas
21.	Md. Faizul Haque	Grameen Unnayan Karmasuchi (GUK)	Barisal	01712042764	faizulguk@yahoo.com	Md. Faizul Haque
22.	S M Sirajul Islam	Jago Nari,Barguna	Barguna	0448-62288, 01716261224	jago_nari@yahoo.com	Hosne Ara Hasi
23.	Ismotara	Jhorna Fimal and Children Debelopment Organization Harinakund Jhenaidah	Jhenidah	01724178401	N/A	Ismotara
24.	Syeda Habiba	Jyoti Women & Child Development Organization	Kushtia	017161220, 01720507670	jyoti.orgbd@yahoo.com	Syeda Habiba
25.	Haider Hossain	Muksudpur Sambad (Local Newspaper)	Gopalganj,	088-06654-56290, 01711517927	haiderms@btb.net.bd	Haider Hossain
26.	Md. Rezaul Karim	Organization of Rural Economic Dev. & Rehabilitation (OREDAR)	Sirajgonj	88-07529-56112, 01711-348095	oredarorg@yahoo.com	Md. Afzal Hossain
27.	Md. Habibur Rahman	Padma Samaj Kallayan Sagnstha	Jhenidah	01717615345	habibpadma@yahoo.com	Md. Habibur Rahman
28.	M. Nazmul Azam David	PARIBARTAN – Khulna	Khulna	041 - 720629	paribartankhulna@gmail.com	M. NAZMUL AZAM DAVID
29.	Ashek-E-Elahi	Progoti (Peoples Research on Grassroots Ownership & Traditional Initiative)	Satkhira	04726-74218 , 01718405066	progoti_as@yahoo.com	Ashek-E-Elahi
30.	Md. Fazlul Hoque Khan	Rural Association for Nutrition Improvement (RANI)	Naogaon	01711451800	rani6500@yahoo.com	Md. Fazlul Hoque Khan
31.	Sadak Saifulla	Rural Community Development Society (RCDS)	Chandpur	01712654601	rcds_sadak@yahoo.com	Sadak Saifulla
32.	Md. J. Abedin (Bablu)	RPO Foundation	Khulna	01718404021, 01912458270	rpo_khulna@yahoo.com, rpo-foundation@yahoo.com	Md. J. Abedin (Bablu)

33.	Arifa Yasmin Shimu	RUPSA (Rural and Urban Poor's Partner for Social Advancement)	Khulna	+88-041-811666	rupsa_08@yahoo.com	Arifa Yasmin Shimu
34.	Mir Abdur Razzak	SAF (Social Advancement Forum)	Kushtia	01718-045268, 01917-555498	saf.razzak@gmail.com	Mir Abdur Razzak
35.	Ayesha Akter	Social Development Service (SDS)	Joypurhat	01711-054796	sds_aysha@yahoo.com	Ayesha Akter
36.	Md. Abdul Motaleb	Socio Economy Development Association for Disabled (SEDAD)	Gazipur	88-02-9810604, 01727671828	sedad_ngo@yahoo.com	Md. Abdul Motaleb
37.	Prosanta Kumar Biswas	Socio Economic Development Organization for the Poor (SEDOP)	Khulna,	088-041-774788, 088-041-760156, 01711056108,	sedop_khulnad@yahoo.com	Prosanta Kumar Biswas
38.	Masum Billah	Social & Environment Increasing Analysis Movement (SEIAM)	Khulna	01712809529, 01912012195	seiam_2004@yahoo.com	Masum Billah
39.	Mst. Romana Begum	Shalter Samaj Kallyan Sagnstha	Jhenidah	01716328873	shalter_org@yahoo.com	Mst. Romana Begum
40.	Md. Munjiurur Rahman Sikder (Pannu)	Sikder Motiar Rahman Saba Sangsta	Narail	01912219377, 01721588193	N/A	Md. Munjiurur Rahman Sikder (Pannu),
41.	Shorifa Akter	Suktara Mohila unnen Songotu	Jhenaidah	01714499275	N/A	Shorifa Akter
42.	Mrs. Sahanara Aktar	Surjamukhi Nari Kallyan Sangho	Bagerhat	01720958057	N/A	Mrs. Sahanara Aktar
43.	Md. Shafiur Rahman	Together for Service of People(TSP)	Pabna	01937-856471	tsp_pabna@yahoo.com	Md. Shafiur Rahman
44.	Sheikh Asad	UDAYAN Bangladesh	Bagerhat	088-0468-63825, 01714083670	udayanbd@yahoo.com, skasadud@yahoo.com	Sheikh Asad
45.	Mrs. Mariya Bhuiyan Marry	Udvaboni Mohila Sangstha	Khulna	01711476400	N/A	Mrs. Mariya Bhuiyan Marry
46.	Mrs. Firoja Begum Mukta	Udayan Mohila Somitee	Bagerhat	01720687454	feroza.mukta2006@gmail.com	Mrs. Firoja Begum Mukta
47.	Sheikh Atahul Haque Jihad	Usha Somaz Kallyan Songtha (USHA)	Jhenidah	01712095859	N/A	Sheikh Atahul Haque Jihad
48.	Md. Jamal uddin	Ussah Sanjstha	Jhenideh	01718808223	N/A	Md. Jamal uddin
49.	W. J esserson	WOAP (Way of Absolute Pice)	Jhenidah	01748669184	N/A	W. J esserson
50.	Mathura Bikash Tripura	Zabarang Kalyan Samity	Khagrachhari	+88037161708	mathura@zks-bd.org	Mathura Bikash Tripura
51.	M M Mahbub Hasan	Community Development Friend (CDF)	Gopalganj	0088-01716-569212, _0088-02-6685564	cdfngo@gmail.com	Ms. Anwara Parvin
52.	Md. Anisur Rahman Joardar	polly unnayan sangstha	Gaibandha	01713749365	pusgaibandha@yahoo.com	Md. Anisur Rahman Joardar
53.	Miss Sweety Parven	Rural Poverty Alleviation Association (RUPA)	Pabna	01732856277, 01720095772	Rupa08@yahoo.com	Miss Sweety Parven
54.	Lokman Hossain (Raju)	Deshbangla Human Development Organization (DHDO)	Barisal.	01725280761	deshbangla_hdo@yahoo.com	Lokman Hossain (Raju)
55.	Arun Kanti Chakma	Assistance for the Livelihood of the Origins (ALO)	Khagrachhari CHT	+88-0371-62067	info@alocht.org, alo_cht@yahoo.com	Rabi Sankar Talukdar
56.	Md. Nazim Uddin	BRRRC	Panchagarh.	056861719, 01711451949	dgus2009@yahoo.com	Md. Nazim Uddin
57.	Md. Anawarul Islam	Rural Vision (R.V)	Meherpur	01812-479299	ruralvision.gangni@gmail.com	Md. Anawarul Islam
58.	Md. Abdul Latif	Alor Disha Foundation	Satkhira	01711 579890	alordisha.foundation@gmail.com	Md. Abdul Latif
59.	Md. Noor Hasanul Habib (Liton)	Assistance for Poor People of Bangladesh (APPB)	Nilphamari	01552377570, 01674800348	appb_bd@yahoo.com	Sajeda Begum
60.	MD. Nuruzzaman Ahamed	Profit Foundation	Lalmonirhat	01714626670	profitfoundation@yahoo.com	MD. Nuruzzaman Ahamed

## Annex-2

### *Brief descriptions of the Organizations contributed in the Case studies*

**Bangladesh Center for Advance Studies (BCAS):** Established in 1986, the Bangladesh Centre for Advanced Studies (BCAS) is a leading non-profit research and policy institute in the non-government sector of Bangladesh and South Asia. BCAS addresses sustainable development through four interactive themes: (a) environment-development integration, (b) good governance and people's participation, (c) poverty alleviation and sustainable livelihoods, and (d) economic growth and public-private partnership. BCAS has been registered with Social Welfare Department as well as NGO Affairs Bureau of Government of Bangladesh. BCAS envisions promoting people-centred sustainable development by applying and advancing scientific, technical and local knowledge through research, by developing models, demonstration, policy advocacy and project implementation. At present BCAS has over hundred full-time and some part-time staff working in different capacities. BCAS has 24 senior professionals and scientists, 40 mid-level professionals and researchers. All staff are graduate.

**Bangladesh Poribesh Andolon (BAPA):** Bangladesh Poribesh Andolon (BAPA) is a common forum of citizens and organizations concerned with the environment of Bangladesh. BAPA is a non-government, non-partisan, non-funded, non-profit, voluntary, membership based, civil society initiative established a decade ago and dedicated to the protection and development of the environment in Bangladesh and elsewhere in the world strictly sticking to its basic principles of absolute self reliance, democracy, scientific, transparency, necessity driven, people oriented, participatory, expert-activist as well as resident-non-resident partnerships. A community-based group, called POROSH, was set up as such a forum concentrating on Dhaka only in 1997. This has virtually been transformed into BAPA in 2000 with nation-wide coverage and expanded dimension. Subscription of the members and philanthropy of individual citizens and national organizations are the main sources of its income for meeting its routine expenditure. BAPA leads the environmental movements in Bangladesh with the support of 6 core Staff and 600 field workers. Around 25 members of the BAPA are active in environmental education related training and among them 10 are active in climate change training activities. BAPA organizes peoples movement, rally, human chain, conference, mass gathering, conducting research, policy advocacy on environmental issues (climate change, rural and urban development, river management, wetland conservation, agricultural development and overall nature conservation etc.) to mobilize the civil society groups, young people, social activist, scientists, academicians, business man, donors and related stakeholder to come forwards for safeguarding the environment of Bangladesh as well as for influencing of government and other policy makers to come up with the corrective actions towards environmental development. BAPA also undertakes publications for education or mobilization of public opinion.

**Bangladesh Environmental Lawyers Association (BELA):** The Bangladesh Environmental Lawyers Association (BELA), a non-profit and non-governmental organization of lawyers was set up in 1992 with the objective of establishing a sound environment and ecological order for all using law as tool. The formation of BELA was indeed a response to the global call for movement to protect and conserve natural environment and ecology that has strong justification in a rural agronomy based country like Bangladesh. With the ever deteriorating environmental state of the country at the backdrop, Dr. Mohiuddin Farooque, the founder of BELA decided to pursue the cause of environmental justice through a motivated local advocacy group. The initial idea was to monitor and pursue implementation and observance of the existing laws on natural resource and environment management. As an advocacy group of young lawyers, BELA since then has been working out techniques and strategies to accord protection to environmental resources and thus safeguard the rights of the millions who depend on such resources. Since inception, the organization has adopted various means to create awareness amongst major actors to activate the great bulk of environmental legislation. BELA has always emphasized on and advocated for wider participation in law making and policy planning to bring in changes in the isolated trend of law and policy framing. The efforts of BELA through public interest litigation have truly sensitized the concept of 'environmental justice' in the country that now has special courts to deal with environmental offences. To institutionalize its efforts, BELA ensures wider participation from both the government and non-governmental sector that has given it wide credibility and acceptance amongst all concerned. The beneficiary of BELA's activity is perhaps every human and non-human being. In attempting to protect people's rights and legitimate interests, BELA's efforts aimed from top echelon of the society and governance to the little mass whose lives and livelihood are often forfeited in various disguise and means.

**Campaign for Popular Education (CAMPE):** CAMPE is a national coalition of NGOs working towards the implementation of program interventions in the education sector. CAMPE was established in 1991. CAMPE is an adaptive and learning organization emphasizing on the promoting of a nation-wide network of voluntary organizations, action groups and media for creating a national literacy movement. CAMPE is working for popularizing the trend- setting activities on quality education and intends to integrate literacy and education programs with other development interventions. CAMPE encourages its member and partner organizations and provides capacity development assistance to develop quality materials and innovative literacy models. CAMPE carries with it a vast experience and works as development partner with a committed work force and strong partnership with all concerned NGOs, CBOs and private sector, national and international agencies and other stakeholders to ensure quality education for all. CAMPE has been working, cooperating, networking, assisting and facilitating dissemination of ideas and sharing of experiences particularly with four major actors, such as, the concerned ministry and line agencies of the government, the donors, NGOs and other democratic forces of the civil society. CAMPE is committed to advocate and lobby for sustainable and pro-poor policy frameworks and effective program interventions for ensuring qualitative improvement in the overall education system by forming networks with organizations having similar vision towards achieving the goal of Education for All (EFA) both nationally and globally. Campaign for Popular Education (CAMPE) develops quality materials and innovative literacy models and implements programmatic interventions in the education sector involving the coalition members. CAMPE also does advocacy and lobbying for ensuring qualitative improvement in the overall education system in the country. CAMPE works with the grassroots development workers, trainers, managers, primary & secondary school teachers, cultural performers, journalists, farmers & people's representatives and 50 percent of the CAMPE the targeted stakeholder is women.

**Campaign for Sustainable Rural Livelihood (CSRL):** In recent years, human induced climate change is emerged as a challenging factor for agriculture and agriculture dependent rural livelihoods. Following the reports of United Nation's Inter agency governmental panel, local researchers affirmed that the climate change is contributing to increasing flood and water logging, drought, salinity, cyclone and wide spread of disease including water borne diseases that will significantly reduce agricultural production in near future, hinder industrial development and as a result will destroy people's livelihood and national economy. It has already been illustrated and researchers agreed that Bangladesh has become one of the most vulnerable countries because of climate change. River erosion and floods in the coastal areas of Bangladesh due sea level rise will create significant amount of displacement in Bangladesh. In this context, more than 150 local, national and international development and civil society organizations launched the Campaign for Sustainable Rural Livelihoods (CSRL) with the goal of working together to ensure sustainable rural development through reduction of poverty and vulnerability. CSRL covers 30 Agro- Ecological Zones (AEZ) of the country involving more than 150 local, national and international development and civil society organizations. However, for a comprehensive and effective campaigning, 8 groups Plain land, Char land, Barind Tract, Haor, Coastal Area, Beel, Madhupur Tract and Hilly Area were formed on the basis of their focus on distinct AEZs. CSRL is facilitating the process of developing a Comprehensive Agrarian Reform Programme (CARP) through participation of small and marginalized farmers, including women, which is expected to be adopted by policymakers. CSRL also promoting the pro-poor agenda in macro-economic policies while negotiating trade agreements and advocating for an effective national climate change plan is put in place to ensure equitable climate regime.

**Coastal Development Partnership (CDP):** The history of CDP is the history of advocacy by NGOs in the South West Coastal Region of Bangladesh. On January 01, 1997, CDP was instituted as a coordinating secretariat for a network of NGOs trying to relieve the sufferings of the people of the waterlogged areas in the southwest coastal region of Bangladesh by the prominent environmental activist and freedom Fighter Ashraful-Alam-Tutu. CDP has been consistently working over a decade on Climate Change, Food sovereignty, Sustainable Agriculture, Responsible Aqua Culture, Pro-pore Environmental Governance, Bio-diversity, and Nature Conservation, Women Rights, and International Financial Institutions and UN negotiations. Since 2002, CDP has been regarded as one of the key resource organization to provide knowledge management support to grassroots NGOs on addressing climate change issues. Besides, CDP are facilitating many global climate change & environmental campaigns in Bangladesh. CDP has membership in 30 international networks. The organization has 45 full-time Staffs (47% Female and 53% Male). One of the notable aspects of the organization is that 22% of the CDP staff is from indigenous community. One-fifth of the staffs are serving with the organization for more than 5 years and rests of the staff are working for 3 to 5 years. Currently 26 full-time staffs and all the volunteers (among the 19 volunteers, 63% are from Indigenous community & 27% are from Bengali community) are working on different climate change initiatives of the CDP. One-fifth (9 staffs) of the CDP staffs working on

general Climate Change training, Environmental education and climate change advocacy (6 are on training/education and 3 are on advocacy issues). Every member of the multidisciplinary Climate Change education & training team has graduate degree on social science, geology, urban planning, law and all of them have direct working experience at grassroots level, and majority of them have received training from International training. CDP is operating at national level with the priority focus on all the coastal (19) & Hill (3) districts in Bangladesh.

Coastal Development Partnership (CDP) has been implementing various pro-poor, gender sensitive project implementation, multidisciplinary action research & evidence based policy advocacy to ensure sustainable livelihood of the coastal poor, safeguard the Sundarban Mangrove Forest, reduce climate change vulnerabilities & wetlands degradation, ensure food sovereignty, and establish poor people's rights over the common ecosystem services, biodiversity & natural resources. On climate change education, training and ecosystem-based adaptation, CDP is directly working with 5000 poor households (50% is women) and 54 grassroots NGOs in Bangladesh. CDP believes that any solutions to climate change must protect the most vulnerable, compensate those who are displaced, guarantee individual and collective rights, and respect people's right to participate in decisions that impact on their lives. CDP has been actively monitoring and participating UNFCCC process since 2003 and day to day information collection culture of the organization always keeps CDP update on climate change. CDP translates global & national policy issues into local language and explain in the climate change and environmental problems in non-technical ways to the targeted stakeholders. On climate change CDP are using cultural tools like drama, songs to popularize theoretical & scientific aspects to the illiterate people. CDP also trains young girl students to disseminate the knowledge to the women and girls in their own community.

**Department of Environment (DoE), Ministry of Environment and Forest, Government of Bangladesh:** The Ministry of Environment & Forests is the nodal agency in the administrative structure of the Central Government, for the planning, promotion, co-ordination and overseeing the implementation of environmental and forestry programmes. The Department of Environment (DOE) under the Ministry of Environment and Forestry (MoEF) is the focal point for the United Nations Framework Convention on Climate Change (UNFCCC) and coordinates climate related activities in the country. Recently, a Climate Change Cell (CCC) has been established to address several issues including adaptation to climate change. The climate change cell has been established in the Department of Environment in 2004 under the comprehensive Disaster Management Program (CDMP), of the Government. It responds to the recognition that Bangladesh is particularly Vulnerable to the effects of climate change. The cell provides the central focus for the Government's climate change related work, operating as a unit of the Department of Environment (DoE) under the Ministry of Environment and Forests (MOEF). Its objective is to enable the management of long term climate risks and uncertainties as an integral part of national development planning.

**Manusher Jonno Foundation (MJF):** Manusher Jonno Foundation (MJF) is an initiative designed to promote 'human rights' and 'good governance' in Bangladesh. MJF originated in 2002 as a local funding mechanism (then Manusher Jonno) to support work in the area of human rights, and became an independent Trust in 2006. MJF provides funding and capacity building support to organizations working on human rights and governance. MJF works in partnership with different stakeholders such as civil society organizations, NGOs, CBOs, government, private sector, research organizations etc. MJF through its partners assists to ensure entitlements of people by building their capacity to demand basic services and raise voice against rights violation. MJF also works on the supply side with duty bearers so that they are responsive to the demands of people. MJF is promoting voices of people whose rights are being denied and violated and creating social environment in building people's dignity through channeling isolated, unlinked efforts about human rights and governance into linked and aligned actions.

**Khulna University:** Khulna University is one of the public universities in Bangladesh. It is situated at Gollamari, Khulna, Bangladesh, by the river Moyuree, beside the Khulna-Satkhira highway. The academic programs of Khulna University started on 31 August 1991 with only 80 students in four disciplines. It is the second public university where a credit course system of education was launched (1997-98). Currently, there are five schools in Khulna University which have 18 disciplines: Science Engineering and Technology School; Life Science School; School of Management and Business Administration; School of Arts and Humanities; School of Social Science. The medium of instruction is English. The Environmental discipline offers four years undergraduate (Bachelor of Science in Environmental Science) and one and half years postgraduate (Master of Science in Environmental Science) degrees and recently started offering Ph.D. programme. Khulna is famous for the Sundarbans Mangrove Forest.

Name of the Organization	Vision of the Organization	Mission of the Organization	Name & Designation of the Chief Executive	Contact address of the organization
Coastal Development Partnership (CDP)	Develop a prosperous, environment-friendly and progressive value-based society, innocent of any discrimination on the basis of caste, creed, race or gender, whatsoever.	Capacitate the disadvantaged, discriminated, deprived and marginalized communities, individuals, people's organization, grassroots institutions, NGOs, citizens' forums and civil societies to achieve human rights, social justice, pro-poor economic development and environmental conservation.	S. Jahangir Hasan Masum, Executive Director, Coastal Development Partnership (CDP)	Musafir Villa, H # 53/1 & 53/2, Flat # B-3, West Agargaon, Shere Bangla Nagar, Dhaka-1207, Bangladesh, Cell: 01911313049, E-mail: masumcdp@yahoo.com
Bangladesh Paribesh Andolon (BAPA)	Build up a nationwide, united, civic movement to achieve the aims of stopping and reversing environmental degradation in Bangladesh.	To stop the process of further environmental degradation in Bangladesh. To reverse, where possible, the damage that has already been done to the environment.	Professor Mozaffar Ahmed, President, Bangladesh Paribesh Andolon (BAPA)	House-9/12, Block- D, Lalmatia, Dhaka, Bangladesh Cell: +8801819223343 E-mail: bapa@sndnb.org, hhrf2002@yahoo.com
Campaign for Popular Education (CAMPE)	An educated, creative, democratic, secular, and humanitarian and poverty free Bangladesh.	achieving the goal of Education for All (EFA) both nationally and globally	Ms. Rasheda K. Choudhury Executive Director Campaign for Popular Education (CAMPE)	5/14, Humayun Road, Mohammadpur Dhaka- 1207, Bangladesh Phone: (8802) 9130427, (8802) 8115769, (8802) 8155031-2, Fax: (8802) 8118342,
Bangladesh Environmental Lawyers Association (BELA)	Promote environmental justice and contribute towards the development of a sound environmental jurisprudence.	Seek judicial or administrative relief to ensure implementation of existing environmental laws. Initiate participatory processes to ensure environmental good governance.	Adv. Syeda Rizwana Hassan Executive Director Bangladesh Environmental Lawyers Association (BELA)	House No. 15A, Road No. 3, Dhanmondi R/A, Dhaka-1205, Bangladesh Phone: (++) 88-02-8614283, 8618706, Fax: (++) 88-02-8612957, E-mail: bela@bangla.net
Manusher Jonno Foundation (MJF)	promote 'human rights' and 'good governance' in Bangladesh	Support critical mass of public and private organizations working in the area of increasing awareness to demand fulfillment of human rights and improved governance leading to poverty reduction.	Ms. Shaheen Anam Executive Director Manusher Jonno Foundation (MJF)	House # 10, Road # 1, Block F, Banani, Dhaka 1213, Bangladesh Phone: 88-02-8824309, 88-02-8811161; Fax: 88-02-8810162 E-mail: anams@manusher.org, info@manusher.org
University of Khulna			Prof. Dr. Mohammad Saifuddin shah. Vice Chancellor University of Khulna	University of Khulna Khulna, Bangladesh Tel: +880 41720171-3 ext. 287/353 (Office) 813239 (Residence)
Department of Environment (DoE) Ministry of Environment & Forest, Government of Bangladesh	implementation of policies and programmes relating to conservation of the country's natural resources including its lakes and rivers, its biodiversity, forests and wildlife, ensuring the welfare of animals, and the prevention and abatement of pollution.	to help secure a clean and healthy environment for the benefit of present and future generations	Director general Department of Environment (DoE) Ministry of Environment & Forest	Paribesh Bhaban, E-16 Agargaon, Dhaka-1207 Tel: +880-2-9115120 (off), +880-2-9347086 (Res) E-mail: <a href="mailto:info@climatechangececell-bd.org">info@climatechangececell-bd.org</a> <a href="mailto:Frsa1962@yahoo.com">Frsa1962@yahoo.com</a>
Bangladesh Center for Advance Studies (BCAS)	promote people-centred sustainable development by applying and advancing scientific, technical and local knowledge through research, by developing models, demonstration, policy advocacy and project implementation	To undertake action research on policy issues and implementation at local, national, regional and international levels for advancing and supporting sustainable development	Dr. Atiq Rahman Executive Director Bangladesh Center for Advance Studies (BCAS)	House 23 Road 10, ADhanmondi, Dhaka, Bangladesh. Phone: (880-2) 9119823, 9113682, 8115829 Fax: (880-2) 8111344 Email: <a href="mailto:info@bcas.net">info@bcas.net</a> Web <a href="http://www.bcas.net/">http://www.bcas.net/</a>
Campaign for Sustainable Rural Livelihoods (CSRL)	Ensuring sustainable rural livelihoods by reducing rural poverty and vulnerability caused by socio-economic and physical factors	Promotion and implantation of effective national climate change plan to ensure equitable climate regime.	Dr.Ahsan U ddin Ahmed Chairman Campaign for Sustainable Rural Livelihoods(CSRL)	Sochibaloy; House-4, Road3, Block-I, Banani, Dhaka1213, Bangladesh. Tel; +88028813607-9, +88028824440 Fax+88028817402

## Annex-3

## Respondent's information for Case Study on behalf of the Organization

Name of the Key Informant	Name of the Organization with Job Title	Sex	Age (years)	Educational Background	Work Background	
					General	Climate Change Education
S. Jahangir Hasan Masum	Executive Director, Coastal Development Partnership (CDP)	Male	36	M. SC	12 years on environment & coastal development	7 years, mainly training module development, climate justice activist and writer
Dr. Abdul Matin	General Secretary, Bangladesh Paribesh Andolon (BAPA)	Male	56	M.B.B.S	Facilitator of people's movement on health rights, environment, forest, river & climate change	Participation in national, international & UN events
Ms. Rasheda k.Choudhury	Executive Director Campaign for Popular Education (CAMPE)	Female	50	MSS	32 years works on education & environment sector	10 years, mainly climate change related seminar, workshop national and international label.
Advocate Syeda Rizwana Hassan	Executive Director Bangladesh Environmental Lawyers Association (BELA)	Female	43	LLM	Last 9years works with the objective of establishing a sound environment and ecological order for all using law as tool.	Working on Law and Policy on Environment and Climate Change.
Ms. Shaheen Anam	Executive Director Manusher Jonno Foundation (MJF)	Female	50	LLM	3years works with the objective with climate change & environment training programs.	Working on climate change and environment related training program
Prof. Dr. Mohammad Saifuddin shah	Vice Chancellor University of Khulna	Male	53	PhD	24 years works in teaching profession.	8 years, mainly climate change related seminar, workshop national and international label.
Fazle Rabbi Sadeque Ahmed	Director (Climate change) Department of Environment (DoE) Ministry of Environment & Forest	Male	47	PhD	2 years 6 month works with the Climate change cell, Department of Environment (DoE), Ministry of Environment & Forest	Working on climate change and environment
Dr. Atiq Rahman	Executive Director Bangladesh Center for Advance Studies (BCAS)	Male	63	Ph.D	24 years on environment, sustainable development and climate change	14 years experience on environmental & climate change education
Dr. Ahsan Uddin Ahmed	Chairman , Campaign for Sustainable Rural Livelihood (CSRL)	Male	55	Ph.D	4 years works with the CSRL Programme on climate change & environment	10 Working on climate change and environment related workshop

## Annex-4

### Survey Questionnaire

This questionnaire aims to scan the current state of environmental and climate change education in the region. In line with this, we request for your assistance by filling up this Questionnaire, the results of which will be shared with you after the study. Your responses will be consolidated and analyzed to help develop ways :

- to strengthen local and global initiatives of environmental educators and advocates that can contribute in building communities that are resilient to threats to human existence and environmental destruction;
- to guide in responding to gaps in environmental education and in global policy environment.

We would appreciate your returning the filled-up form to the sender and to: [CLIMATE@cecphils.org](mailto:CLIMATE@cecphils.org) and [chedominguez@yahoo.com](mailto:chedominguez@yahoo.com) not later than November 30, 2010. Thank you very much for your cooperation

Name of Respondent:

Email Address:

Name of Organization/Institution:

Year Established:

Address:

Country:

Contact Details: Telephone:

Fax:

- Is your organization/network involved in ecological/environmental concerns?
- Is your organization/network involved in the issue of climate change?
- If YES, what are your current involvements? (please put an X mark on as many items as applicable)

Organizational Action/Strategies	Remarks, if any:
<input type="checkbox"/> Education and Information Dissemination	
<input type="checkbox"/> Training/Capacity Building	
<input type="checkbox"/> Publications/Communication Materials Development	
<input type="checkbox"/> Research, Documentation, Technology Development	
<input type="checkbox"/> Networking and Alliance Building	
<input type="checkbox"/> Campaign and Advocacy	
<input type="checkbox"/> Legislative Lobbying and Policy Advocacy	
<input type="checkbox"/> Climate Change Mitigation <sup>12</sup>	
<input type="checkbox"/> Climate Change Adaptation <sup>13</sup>	
<input type="checkbox"/> Others: please specify	

- Who are the targets of your work on climate change? (please put a check or X mark on as many items as applicable)

SECTOR OR ECONOMIC CATEGORIES	GENDER AND INTERGENERATIONAL CATEGORIES	GEOGRAPHICAL SETTING
<input type="checkbox"/> Peasants	GENDER:	ECOSYSTEMS
<input type="checkbox"/> Indigenous/tribal peoples	<input type="checkbox"/> all	<input type="checkbox"/> Lowland
<input type="checkbox"/> Fisherfolks	<input type="checkbox"/> men	<input type="checkbox"/> Upland/mountainous
<input type="checkbox"/> Professionals	<input type="checkbox"/> women	<input type="checkbox"/> Coastal/river
<input type="checkbox"/> Labor	<input type="checkbox"/> homosexuals/lesbians/ transsexuals/bisexuals	<input type="checkbox"/> Small Island
<input type="checkbox"/> Urban poor	Others: please specify:	<input type="checkbox"/> Urban

<sup>12</sup> "Mitigation seeks to limit climate change by reducing the emissions of GHG (greenhouse gases)". Some of the cited options are energy efficiency and conservation (e.g., efficient vehicles and buildings), fuel shift, carbon dioxide capture and storage, nuclear fission (e.g., nuclear power), renewable electricity and fuels (e.g. wind power), and geo-engineering.

<sup>13</sup> "Adaptation aims to alleviate the adverse impacts of climate change through a wide range of actions". It "involves adjustments to decrease the vulnerability of communities, regions and nations to climate variability and change and in promoting sustainable development." Some examples are disaster preparedness, improving water sources, constructing appropriate infrastructure, improving farming technology, use of traditional knowledge and innovations; improving weather monitoring system, etc. Source: IBON International. IBON Primer on Climate Change. Philippines: IBON International. 2008, p.30-37.

<input type="checkbox"/>	Academe		<input type="checkbox"/>	Others: please specify	
<input type="checkbox"/>	Scientists	AGE GROUPS:			
<input type="checkbox"/>	Business	<input type="checkbox"/>	Adults	REACH:	
<input type="checkbox"/>	Media	<input type="checkbox"/>	Adolescents in school	<input type="checkbox"/>	Local communities
<input type="checkbox"/>	Development workers	<input type="checkbox"/>	Out-of school youth	<input type="checkbox"/>	National/country-wide
<input type="checkbox"/>	Government	<input type="checkbox"/>	children	<input type="checkbox"/>	Regional (several countries)
<input type="checkbox"/>	Middle class	<input type="checkbox"/>	elderly/senior citizens	<input type="checkbox"/>	International (across regions)
Others: please specify: O Local residents		Others: please specify:		Others; please specify	

5. Would you like to be involved in our work at CLIMATE Asia Pacific which hopes to link up education and capability building efforts in addressing peoples' vulnerability to climate change? (please see attached document)
6. If YES, in what way do you believe, can you contribute to efforts to strengthen the region's capacity to address climate change?

7. Please write down if you have further comments on your work on climate change, this initiative of CLIMATE Asia Pacific, or on the general issue of climate change. Thank you for your cooperation!

## Annex-5

### Guide Questions for the Country Case Study

**Reminders to the Researcher:** In each country, a tripartite perspective and educational experience should be studied. At least six organizations should comprise the case study samples -- from civil society organizations/network, government agencies, and the academe. The judgment on how many organizations to interview in each organizational category will be left with the case study writer or the thematic conveners in consideration of the relative significant roles that these tripartite organizations play in the country. In addition, at least three prominent educators/environmental advocates/activists outside the six sample organizations will be interviewed to provide the macro perspectives and insights on their country's experiences. These guide questions consist of two parts—Part 1 is for the sample organization/network while Part 2 is for the interview with the prominent educators/environmental advocates.

Documents to request from the informant/s: Organizational brochure, VMG, training designs/description of training courses, Sample handouts/teaching-learning materials, major publications/multimedia materials.

#### PART 1: FOR THE SAMPLE ORGANIZATION/NETWORK

##### A. Basic Information on the Organization

1. Name of Organization and Year Established
2. Address and Country
3. Contact Details: Telephone/ Fax #/Email address/Website
4. Name of Head of Institution and Designation
5. Total Number of Staff and gender; general educational and work background of staff
6. Number of Staff in Education/Training Work in general and number of educators/trainers on climate change education, in particular
  - a. What are their educational and work backgrounds?

##### B. Background on the Key Informant

1. Name and designation
2. Age, educational background, gender, work background in general and on climate change education in particular
3. Number of years with the organization, number of years in education/training work (with the organization and outside the organization)
4. What motivated you to join the organization?

##### C. Background/Context of Education and Training Work on Climate Change and Environment

1. Organizational vision, mission and goals or mandate/objectives/thrusts
2. Brief descriptions of the organization's programs and services and target sectors/groups
3. Why your organization got involved in climate change and/or environmental concerns in particular?
4. What particular issues on climate change and/or environment does your country face?
5. How do you see the role of education/training in responding to climate change and/or environmental issues? Please cite concrete experiences.

##### D. Educational Offerings/Program and Services on Climate Change and Environment

1. Educational/training courses or activities
  - 1.1 What educational/training courses or activities does your organization conduct on climate change and environment
  - 1.2 What are the specific objectives and contents of these educational activities and training courses?
  - 1.3 How frequent does your organization conduct these in a year?
  - 1.4 What methods of teaching learning do you use?
  - 1.4 How does your organization design educational/training courses or activities or programs (in terms of how you come up with the specific courses/activities, contents, methods, instructional materials, etc.)?
2. Target Learners
  - 2.1 Who are your target learners? (describe in terms of socio-econ, education, age, gender)
    - 2.1.1 What are the reasons for prioritizing them? How do you choose your learners?
    - 2.1.2 Environmental issues experienced
    - 2.1.3 Why climate change is a concern or issue to them
3. Contents and Messages of Education and Training work
  - 3.1 What can you say about these contents in terms of the kinds of knowledge shared (e.g. are there technical knowledge and skills? Are indigenous/traditional/local knowledge and practices included? Are there topics on ideological/political perspectives on climate change etc.)?
  - 3.2 Main messages shared about climate change and environmental concerns in your education work and advocacy work in terms of:
    - 3.2.1 How your organization explain why climate change and environmental problems are happening, who are responsible and what are the solutions
    - 3.2.2 Who are affected and how are they affected (or what are the effects)
    - 3.2.3 The roles of government, civil society, academe, communities and individuals in helping address climate change and environmental problems
    - 3.2.4 What are the national and global initiatives, who are their movers/proponents and your critics of these initiatives
  - 3.3 In your contents, where do your learners have difficulty in learning? Why?
  - 3.4 What measures or actions do you do to remedy the learning difficulties of your learners?

4. Learning and Instructional Materials
  - 4.1 What learning and instructional materials have you produced and used in your educational activities and training courses? NOTE: your probing should include the following: learning materials for learners (such as handouts, primers, etc.), teaching aids (e.g., visual aids, power point presentations, etc.), audio-visual production/materials (e.g., video production, documentary films, songs, etc.), teaching manuals, newsletters, publications, others (please specify).
  - 4.2 Which of these do you disseminate to your learners? If not disseminated, why?

**E. Organizational Capacity and Contribution in Education/Training Work on Climate Change**

1. Areas of Competency and Capacity Building
  - 1.1 What are the educational (both formal and informal) and work backgrounds of your educators and trainers on climate change?
  - 1.2 Do you need to tap experts outside your organization/network as resource speakers on climate change? If yes, where do you get these experts? On which topics do you need to tap experts?
  - 1.3 What capacity-building activities are being done by the organization to prepare and improve the performance of your educators and trainers on climate change? When are these conducted and how frequent?
2. What problems does your organization encounter in education/training work and advocacy work on climate change (please allow the informant to share freely, then probe on items below which have not been pointed out):
  - 2.1 On designing your education/training courses/activities/programs
  - 2.2 On the participants (situations and learning challenges)
  - 2.4 On educational/training management (preparatory phase, actual conduct, after the activity)
  - 2.5 On the curriculum development and production of instructional materials
  - 2.6 On the capacity of the educators and trainers
  - 2.7 On organizational challenges/constraints
  - 2.8 On networking concerns
  - 2.9 On engaging/collaborating with government , academe, civil society organizations
3. What are your organization’s major strengths in climate change education? What are your organization’s major weaknesses in climate change education?
 

Areas for Probing:

  - 3.1 Educational/training courses or topics
  - 3.2 Capacity building needs of educators and trainers themselves
  - 3.3 Capacity building of your target learners
  - 3.4 Resource materials (such as learning materials, references, etc.)
  - 3.5 Lens/perspectives in viewing environmental concerns, climate change.
4. What are the gaps/lacking in your education/training and advocacy on climate change?
 

Areas for Probing:

  - 4.1 Educational/training courses or topics
  - 4.2 Capacity building needs of educators and trainers themselves
  - 4.3 Capacity building of your target learners
  - 4.4 Resource materials (such as learning materials, references, etc.)
  - 4.5 Lens/perspectives in viewing environmental concerns, climate change.
5. What do you think are your major contributions on education and training and advocacy work on climate change in your country?
6. What are the perceived effects (or results or changes that happened) of your education/training work on climate change on the following:
  - 5.1 Target learners
  - 5.2 Your own organization
  - 5.3 The networks that you are involved in
  - 5.4 Policy advocacy in your country and globally

**F. Networking Initiatives on Climate Change**

1. Do you know organizations and networks which also address the issues on climate change? What particular issues on climate change do they address? What support or assistance or activities do they offer (especially in education/training and advocacy work)?
  - 1.1 in your country
  - 1.2 international
2. Which organizations and networks do you affiliate or partner with (in the country and internationally) and what activities on climate change have you worked together? (in your country and international-level)? How frequent are your collaborative undertakings?
3. What are your considerations or bases in networking with these organizations and networks?
4. What concerns and issues on climate change do you raise with your network and partner organizations? To what extent do you believe have you influenced your network/partner organizations on these issues and concerns? How did/do you do it?
5. What other organizations and networks do you hope to network with on climate change issues in the future—local, national and global? Why?
6. What do you think are lacking in networking initiatives on climate change in your country and globally?
  - 6.1 In the identified gaps/needs above, how do you think can these be addressed or responded and by whom? What role/s can education and training play in addressing these gaps?

G. Country-level and Global Initiatives in Responding to Climate Change

1. What are the country-level responses/initiatives to climate change? Who are the initiators or proponents of these initiatives (NOTE: probe on initiatives from the government, civil society organizations, academe, basic sectors, public at large)
2. What global initiatives or responses to climate change do you know about? Who are the proponents of these global initiatives?
3. What are your critics of these initiatives/responses?
4. In these national and global initiatives, which initiatives/responses does your organization support and disseminate to your learners? Why do you support these initiatives?
5. What do you think are lacking in national and local initiatives and efforts to respond to climate change? Who should be doing these?
  - 5.1 In the identified gaps/needs above, how do you think can these be addressed or responded and by whom? What role/s can education and training play in addressing these gaps?

H. National and Global Policies on Education/Training Work on Climate Change

1. Are you aware of the following global policies and background materials on climate change education? \_\_\_ YES \_\_\_ NO

Global Policies/Background Materials on Climate Change Education:

- Intergovernmental Panel on Climate Change (IPCC) Working Paper
- Decade of Education for Sustainable Development
- Chapter 4 Letter C on Capacity Building, pp. 21-22 of the Climate Change Negotiation Document (as of August 2010 version)

- 1.1 If the respondent said YES, what are the significant features of the provisions you find meaningful?
- 1.2 What are still lacking?
- 1.3 If the respondent said NO, please explore on the reasons or circumstances why he/she or their organization is not aware.

2. Are you aware of the following national policies on climate change education? \_\_\_ YES \_\_\_ NO

NOTE TO THE RESEARCHER:

Please identify with your organization what specific national/country policies or background materials related to climate change education would you like to probe on the extent of awareness of the six sample organizations.

- 2.1 If YES, what are the significant features of the provisions you find meaningful?
- 2.2 What are still lacking?
- 2.3 If the respondent said NO, please explore on the reasons or circumstances why he/she or their organization is not aware.
3. In the identified gaps/needs at the global and national levels cited above, how do you think can these be addressed or responded and by whom? What role/s can education and training play in addressing these gaps?

I. Future Perspectives

1. What future environmental issues or issues on climate change do you think should be addressed in the environmental movement in your country and globally?

PART 2: GUIDE QUESTIONS FOR PROMINENT EDUCATORS/ENVIRONMENTAL ACTIVISTS

A. Background on the Key Informant

1. Name
2. Organizational affiliation, position/designation, number of years with the organization
3. Age, educational background, gender
4. Work background in general and on education for sustainable development/climate change education in particular
5. Involvement, foci of interest, and number of years in education/training work and/or environmental advocacy/activism (with the organization and outside the organization);

B. Views on Initiatives on Climate Change and Environmental Concerns and Needs

1. What do you believe are the urgent/serious environmental issues/problems in your country?
2. Do you believe that climate change is an important environmental issue today? Why?
3. Describe what are the major responses of various stakeholders (e.g., government, non-government, academe, communities, etc.) on climate change and environmental issues?
4. What are your comments and observations regarding how climate change and environmental issues are being addressed by various stakeholders? Who are being affected by these initiatives and in what ways?
5. Which of these initiatives/responses do you advocate for? Why?

6. What is your analysis on why the environmental issues/problems that you mentioned are happening? How about climate change?
7. What other responses on climate change do you believe should be included in your country's range of responses? Who should be doing these? What do you believe will be the practical and strategic importance and gains of your proposed responses to those who are most affected by climate change?

C. Views on Capacity Building Efforts on Climate Change and Environmental Concerns

1. Who are currently involved in capacity building on climate change and environmental concerns in your country? What kinds of capacity building assistance do they provide? Who are their target audience?
2. What can you say about the capacity building initiatives of these groups?
3. What have these capacity building initiatives achieved so far in terms of the following:
  - a) addressing climate change and environmental concerns in your country;
  - b) building awareness of communities;
  - c) helping communities address climate change and environmental issues?
  - d) Policy advocacy in your country and globally
- e) Strengthening the network on climate change in your country
4. What are the major problems or areas for improvement in the capacity building efforts on climate change and environmental concerns in your country?
5. What do you think are the gaps in capacity building on climate change and environmental concerns?
6. What are your recommendations to improve the capacity building initiatives on climate change and environmental work in your country?

D. Views on National and Global Policies on Climate Change Education

1. Are you aware of the following global policies and background materials on climate change education?  YES  NO

Global Policies/Background Materials on Climate Change Education:

- Intergovernmental Panel on Climate Change (IPCC) Working Paper
- Decade of Education for Sustainable Development
- Chapter 4 Letter C on Capacity Building, pp. 21-22 of the Climate Change Negotiation Document (as of August 2010 version)

1.1 If the respondent said YES:

- a) What are the significant features of the provisions you find meaningful?
- b) Who within your country (e.g., government, civil society, academe, others) are advocating for these global policies? Who have contrary opinions and what are their reactions?
- c) To what extent have these been disseminated to the public especially to those who will be significantly affected by these policies?
- d) To what extent have these policies been successful in contributing to the various capacity building initiatives on climate change in your country?
- e) What are still lacking?

1.2 If the respondent said NO, please explore on the reasons or circumstances why he/she or their organization/network is not aware.

2. Are you aware of the following national policies on climate change education?  YES  NO

NOTE TO THE RESEARCHER:

Please identify with your organizational/network leaders what specific national/country policies or background materials related to climate change education would you like to probe on the extent of awareness of the six sample organizations. Then, list them here just like in H.1 above to complete this portion of the guide questions.

2.1 If the respondent said YES:

- a) What are the significant features of the provisions you find meaningful?
- b) Who (e.g., government, civil society, academe, others) are advocating for these policies in your country? Who have contrary opinions and what are their reactions?
- c) To what extent have these been disseminated to the public especially to those who will be significantly affected by these policies?
- d) To what extent have these policies been successful in contributing to the various capacity building initiatives on climate change in your country?
- e) What are still lacking?

2.2 If the respondent said NO, please explore on the reasons or circumstances why he/she or their organization/network is not aware.

3. In the identified gaps/needs at the global and national levels cited above, how do you think can these be addressed or responded and by whom? What role/s can education and training play in addressing these gaps?
4. What other policy recommendations on climate change education do you want to propose?

E. Future Perspectives

1. What future issues on climate change and environment do you think should be addressed in the environmental movement in your country and globally?

Education for sustainable development is a Life wide and lifelong endeavor, which challenges individuals, institutions and societies to view tomorrow as a day that belongs to all of us, or it, will not belong to anyone.

(United Nations Decade of Education for Sustainable Development 2005–2014)