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Community Based Adaptation to Climate Change Bulletin

A Summary of the Second International Workshop on Community-Based Adaptation to Climate Change

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SECOND INTERNATIONAL WORKSHOP ON COMMUNITY-BASED ADAPTATION TO CLIMATE CHANGE: 24-28 FEBRUARY 2007

The second international workshop on community-based adaptation to climate change was held at the Radisson Water Garden Hotel in Dhaka, Bangladesh, from 24-28 February 2007. Organized jointly by the Bangladesh Center for Advanced Studies (BCAS), International Institute for Environment and Development (IIED) and RING Alliance of Policy Research Organizations, the workshop consisted of two days of field trips to visit community-based adaptation initiatives followed by three days of discussions in Dhaka. The workshop aimed to share the latest developments in community-based adaptation programmes, priorities and solutions with a view to integrating the lessons into national and international development programmes. More than 110 policymakers and representatives from non-governmental organizations (NGOs), research and policy institutes, as well as development practitioners and media were in attendance.

During the first two days, site visits to four different locations in Bangladesh were organized to give participants a closer look at local adaptation initiatives and to enable the communities to share their knowledge of adaptation and climate change. Locations included: drought-prone areas in Parbatipur in the Chapai Nawabgonj District of northwest Bangladesh; flood and river erosion areas in Gidari and Kamarjani in the Gaibandha District, also in northwest Bangladesh; flood and water logging areas in Kotalipara and Rajoir in the Madaripur and Gopalganj Districts in south-central Bangladesh; and regions prone to increased salinity and cyclones in Munshigonj in the Satkhira District in the southwest coastal region of Bangladesh.

The subsequent three days of discussions in Dhaka were structured around two themes: climate change science and adaptation, and mainstreaming and partnership. Introductory panels were followed by parallel technical sessions consisting of presentations and discussions. Reports from the technical sessions were then presented to plenary, and followed by observations by panelists. Under climate change science and adaptation, technical sessions addressed: agriculture, drought and food security; extreme events; and health and climate change. Under mainstreaming and partnership, technical sessions addressed: tools and methods; extreme events; communication and knowledge; and mainstreaming and partnerships. A final panel discussion revolved around two themes: scaling up, capacity building, partnership and mainstreaming; and supporting community-based adaptation. This was followed by concluding remarks from keynote speakers and guests. Workshop outputs include: a two-page



A billboard explaining the causes and impacts of climate change, and what can be done to adapt to these impacts.

summary with key points from the discussions; a 10-15 page report; an edited volume of collected papers presented at the workshop; and the formation of a community-based adaptation network (CBA Network).

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A BRIEF HISTORY OF CLIMATE CHANGE ADAPTATION AND DEVELOPMENT ISSUES

Climate change is considered to be one of the most serious threats to sustainable development, with adverse impacts expected on the environment, human health, food security, economic activity, natural resources and physical infrastructure. Global climate varies naturally, but scientists agree that rising concentrations of anthropogenically produced greenhouse gases in the earth's atmosphere are leading to changes in the climate. According to the Intergovernmental Panel on Climate Change (IPCC), the effects of climate change have already been observed, and scientific findings indicate that precautionary and prompt action is necessary.

While mitigation has traditionally been the pivotal issue for many climate change experts, adaptation to the effects of climate change is now acknowledged as necessary for responding effectively and equitably to the impacts of both climate change and climate variability. In recent years, adaptation has become a key focus of the scientific and policy-making communities and is now a major area of discussion in the multilateral climate change process. Adaptation has been implicitly and explicitly linked with development-focused action, particularly as the IPCC has underscored that developing countries are disproportionately vulnerable to climate change and lack adaptive capacity. Development processes and trajectories will be affected by the rate of climate change, and this is especially important for developing countries with growing economies. Particular attention will need to be paid to the management of water and other natural resources, agricultural activities, and the sources and generation of energy.

Under the UNFCCC, adaptation appears as a cross-cutting theme. While the first Conference of the Parties (COP 1) in 1995 addressed funding for adaptation (decision 11/CP.1), it was not until the adoption of the Marrakesh Accords in 2001 that adaptation began to be more widely seen as a prominent area for action, as set out in decision 5/CP.7 (adverse effects of climate change). Following the conclusion of consideration of the IPCC's Third Assessment Report, COP 9 requested the UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA) to initiate work on scientific, technical and socioeconomic aspects of, and vulnerability and adaptation to, climate change (decision 10/CP.9).

Parties reached a milestone at COP 10 in 2004 with decision 1/CP.10, known as the Buenos Aires Programme of Work on Adaptation and Response Measures. COP 10 set up two complementary tracks for adaptation: the development of a structured five-year programme of work on the scientific, technical and socioeconomic aspects of vulnerability and adaptation to climate change under SBSTA, which was adopted at COP 11 in 2005 (decision 2/CP.11); and the improvement of information and methodologies, implementation of concrete adaptation activities, technology transfer and capacity building under the Subsidiary Body for Implementation (SBI). At COP 12 parties concluded the initial list of activities to be undertaken under the five-year SBSTA programme of work and renamed it the "Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change." Parties also made progress on the governing principles of the Adaptation Fund, which was established by the Kyoto Protocol to fund adaptation activities through a two-percent levy on emission reduction projects undertaken under the Clean Development Mechanism (CDM). A decision on ways forward on adaptation is expected at COP 13, to be held in Bali, Indonesia, in December 2007.

FIRST INTERNATIONAL WORKSHOP ON COMMUNITY-BASED ADAPTATION:

The first international workshop on community-based adaptation took place two years ago on 16-18 January 2005, also in Dhaka. Jointly organized by BCAS, IIED, RING and the World Conservation Union (IUCN), the workshop was attended by more than 80 experts, policymakers, NGO representatives and grassroots practitioners who discussed possible impacts of climate change on local communities living in vulnerable areas and how to enable them to adapt to climate change in the future.

REPORT OF THE WORKSHOP

On Monday, 26 February, participants addressed climate change science and adaptation. In the morning, an opening plenary session was followed by two technical sessions on agriculture, drought and food security, while in the afternoon technical sessions were held on extreme events and health and climate change, followed by a plenary panel discussion. On Tuesday, 27 February, participants addressed mainstreaming and partnership. Technical sessions discussed tools and methods, extreme events, and communication and knowledge. The workshop concluded on Wednesday, 28 February, with a plenary discussion on recommendations for how to forward research and work on community-based adaptation. Before closing, a final key speaker session took place and a vote of thanks was held.

MORNING PLENARY I: CLIMATE CHANGE SCIENCE AND ADAPTATION

Atiq Rahman, Executive Director, BCAS, welcomed participants on behalf of the organizing committee, and noted the exponential increase of interest in community-based adaptation.

Richard Klein, Stockholm Environment Institute (SEI), Sweden, spoke about adaptation and evolution and presented the "Burtoni" award, named after its first recipient, Ian Burton, for his contribution to adaptation science and policy. Roger Jones, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia, who received the second Burtoni award and was therefore responsible for selecting this year's recipient, presented the award to Saleemul Huq, IIED, UK, for his work linking adaptation and development, his research on decision making and his efforts to build capacity.



Roger Jones, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia, presented the "Burtoni" award to Saleemul Huq, IIED, UK, for his work linking adaptation and development, his research on decision making and his efforts to build capacity. The "Burtoni" award is named after its first recipient, Ian Burton, for his contribution to adaptation science and policy. L-R: Ian Burton (IPCC lead author), Roger Jones (CSIRO), Atiq Rahman (BCAS), Saleemul Huq (IIED), and Richard Klein (SEI).

Ian Burton, Intergovernmental Panel on Climate Change (IPCC) lead author, reviewed the process of how adaptation has “filtered down” since the signing of the UN Framework Convention on Climate Change (UNFCCC) in 1992 and said that a reverse process of “flooding up” was needed, where information on adaptation is “brought up” to the UNFCCC. He suggested this might be done by synthesizing and generalizing information, developing models of adaptation, and calculating adaptation costs. On synthesizing information, Burton identified nine lessons, including the need to: adapt now; strengthen institutions; involve those at risk; use sector-based approaches; and expand information, awareness and technical knowledge. Other lessons learned are that: adaptation equals development; international financial assistance is necessary; and adaptation is context-specific. He called for attention to replicability and stressed the need to better understand decision making and the motivation and obstacles to action.

Saleemul Huq noted that community-based adaptation has moved rapidly to the forefront of the climate change agenda. Emphasizing that vulnerable communities will be most affected by the impacts of climate change, he asked which lessons learned can help communities adapt, and said this workshop aimed to start addressing these questions. He highlighted the advantage of beginning the workshop with site visits to ground participants in the field. He suggested the workshop agree to formalize a network to address the “tidal wave” of community-based adaptation, and said this network could possibly take the form of annual meetings or working groups.

AGRICULTURE, DROUGHT AND FOOD SECURITY I

This session was chaired by Zahurul Karim, former Secretary, Ministry of Fisheries and Livestock, Bangladesh.

Sajjad Zahir, University of Lethbridge, Canada, addressed prioritizing community-based strategies for adaptation. He discussed the need for multi-criteria in decision-making, and explained the Analytic Hierarchy Process (AHP) and illustrated its applicability to adaptation. He emphasized divergent preferences and judgments, relevance of human aspects and social capital, and integrating quantitative and non-quantitative factors into the decision-making process. He discussed AHP applications in mitigation, impact analysis and climate research, and a specific example applied to adaptation strategies, integrating various stakeholders, strategies, and criteria and attributes. He concluded that AHP has been a popular choice for analyzing and prioritizing strategies in climate change applications, and that it can be extended to community-based adaptation.

Ngamindra Dahal, National Trust for Nature Conservation, Nepal, discussed climate change impacts and adaptation measures at the community level in Nepal. He identified local perceptions on climate change and impacts, including emerging alien plant species, warmer winters, post-winter snow, increased frequency of extreme events, growing vulnerability of mountain dwellers, and increased vector-borne diseases. He highlighted local adaptation responses, such as use of metal sheets to prevent rainwater leakage, alternative storage tanks or irrigation canals for rainwater collection, temporary migration, cultivating shorter span crops, and prayers and offerings at local monasteries and shrines. He said further actions required include gathering data to assess climate change intensity, and a need-based service mechanism to support vulnerable households.

Stephan Baas, Food and Agriculture Organization (FAO), Bangladesh Country Office, discussed a project on livelihood adaptation to climate change in drought-prone areas of

northwest Bangladesh, and provided examples and lessons learned from farmers’ fields. He emphasized stakeholder engagement and feedback in designing adaptation strategies and testing options, and synthesizing indigenous practices and knowledge with scientific knowledge into suitable adaptation options. He stressed community mobilization and awareness raising through local culture and practices, highlighting dramas and singing about climate change. He also emphasized integrating agriculture with other strategies related to income diversification and policy formulation.



Shirin explains how she has had to move her house countless times over the last few years because of flooding.

Baas said development, disaster risk management and climate change adaptation are closely related at the local level, and institutional capacity building is key, and urged promoting action research to develop new varieties and cropping patterns to respond to climatic risks.

Arivudai Nambi Appadurai, M.S Swaminathan Research Foundation, India, discussed a community-based project in the semi-arid regions of India aimed at improving delivery systems, and promoting multi-level policy dialogues and general awareness of climate related impacts.

He addressed community-driven strategies and actions and noted water, agriculture, land use, livestock and energy-based interventions. He highlighted perceived barriers to adaptation including lack of: knowledge; appropriate technology; credit and savings; and timely information covering weather forecasting. He noted the establishment of Village Knowledge Centers, and suggested the use of information technologies and a knowledge center or hub to disseminate information via satellite to the villages.

Shohel Parvez, BCAS, discussed good, bad and innovative practices to address drought in northwest Bangladesh. He documented existing coping strategies, categorized existing practices, and urged gender awareness. He said preserving rainwater through storage facilities had resulted in increased potato and wheat crop yields, employment for marginal farmers and day laborers, and higher income levels. He noted that larger irrigation projects have not considered climate change when expanding, and no official assessment on groundwater depletion exists.

DISCUSSION: In the ensuing discussion, one participant pointed to social and economic inequities generated by shrimp farming in the southern coastal area of Bangladesh. Participants noted that some adaptation techniques are harming poor people, pointing to dissent within some communities, and highlighted limits to adaptation given the scope of the problem. Participants also suggested discussing process, not projects, and taking into account younger generations in education and awareness raising. One participant stressed the value communities place on relationships, and said justice must be factored into the equation. Saleemul Huq reiterated that the issue of climate change is one of global inequity, and that the political economy must be challenged. He noted that

in affected areas even a rich farmer is vulnerable. Chair Karim noted that in the 1980s, when climate change activities began in Bangladesh, no one knew that drought could be so severe and destroy crops and that the coastal area would dry up forcing farmers to switch to shrimp farming.

AGRICULTURE, DROUGHT AND FOOD SECURITY II

This session was chaired by Jabavu Clifford Nkomo, International Development Research Center, Kenya.

Rachel Berger, Practical Action, UK, presented on adapting to drought in a semi-arid area of Kenya, and described efforts to improve livestock productivity and seed banks. Noting that globalization of the seed industry had resulted in a great loss of agricultural biodiversity, which is crucial to coping with climate change, she said that maintaining a sustainable supply of seed varieties is a key adaptation strategy. She highlighted some successes in scaling up and underscored the importance of strong local organizations and linking to local service providers.

Salimata Wade, Environmental Development Action in the Third World (ENDA), Senegal, presented on a successful agroforestry project in the Sebijotane area of West Senegal. Focusing on the challenges of replicability, she pointed to the need to engage the state and involve more communities and NGOs, and said that institutional assistance is key to scaling up.

Olena Reza, BCAS, reported on a project on community-based flood plain resource management in the Chanda Beel Golpangonj region in Bangladesh. She stressed participatory action-plan development and awareness raising and the importance of organizing community groups, diversifying aquatic resources, producing income-generating activities, and biodiversity conservation.

Mevan Vajira Lenaduwa Hettige, Practical Action, Sri Lanka, presented on participatory research in rice varieties as an option for adapting to climate change along the coast of Sri Lanka. He described the process through which farmers participated in the selection of a saline-tolerant rice variety, paving the way for a need-based selection of rice varieties and promoting faster adoption of these varieties in the farming community.

Champa Madhumathi Navaratne, University of Ruhuna, Sri Lanka, spoke about enhancement of crop security in Sri Lanka's southern dry zone. She explained that studies on the variation of the onset, duration and magnitude of rainfall in the region in the last 50 years has shown increases in dry periods and a delay in the onset of the rainy season, and suggested that irrigation demand could be minimized and crop development possibly be improved if farmers adapted to the optimum simulated crop establishment time.

DISCUSSION: Participants addressed the challenges of ensuring sustainability and measuring the success of a project. They also discussed: the problem of global seed distribution and seed provision; gender-specific knowledge; the challenge of incorporating lessons learned into government policies; questions of land tenure; and how to influence local decision making. On interacting with under-resourced service providers, comments were raised on the possible role of civil society and decentralized service provision and accountability. On measuring a project's success, presenters noted the need for appropriation of the project by the community and availability of resources for evaluation for a certain amount of time after the project's completion. They also stressed the need for long-term institutional support as adaptive capacity building requires a long-term approach.



River bank protection activities along the Brahmaputra River, which completely dries up during the dry season and floods over during the rainy season.

EXTREME EVENTS I

Madeleen Helmer, Red Cross/Red Crescent Climate Center, the Netherlands, chaired the session.

Jesse Manuta, Ateneo de Davao University, the Philippines, spoke on adaptation pathways of Agusan Marsh Indigenous Communities coping with both drought and flood. Noting that formal and informal institutions shape vulnerability and adaptive capacities, he drew attention to gender relations, health and finance as critical factors in peoples' long-term adaptive strategies.

Patrina Dumar, University of the South Pacific, Fiji, elaborated on the Climate Change Adaptation in Rural Communities project in Fiji. She explained that the project's aim is to develop an integrated approach to climate change in six rural communities focusing on coastal ecosystems and water supply issues, and noted that the two main barriers to implementing climate change adaptation are socioeconomic conditions and weak capacity and governance at national- and local-level development planning.

Dinanath Bhandari, Practical Action, Nepal, reported on work done with flood-prone communities in Nepal. He explained that small-scale disasters have increased in recent years, and noted the difficulty of distinguishing between impacts due to climate change and those resulting from inefficient natural resource management. He stressed that adaptation measures are context-specific, that adaptation is careful development taking into account future climatic conditions, and that small actions on the ground can have a significant impact.

Noting an almost five-fold rise in disasters between 1960 and 1990, mostly of hydro-meteorological origin, Sudip Mitra, National Institute of Disaster Management, India, spoke about integrating adaptation to climate change into disaster management. He emphasized the similarities between community-based adaptation and community-based disaster management, and said that a systematic approach to reducing risks is to shift the focus from hazards to risk management.

DISCUSSION: During the discussion, one participant drew attention to institutional mechanisms for independent evaluation of disasters such as those undertaken after airplane accidents. Another participant raised the role of belief systems in determining community interest in adaptation projects. Participants also addressed problems of communication across different epistemic communities.



The floating garden, developed by Practical Action, is an adaptation technology to allow farmers to grow food on flooded land using water hyacinth as a floating raft.

HEALTH AND CLIMATE CHANGE

Andrew Trevett, World Health Organization (WHO), Bangladesh, chaired the session.

Mozaharul Alam, BCAS, summarized findings of ongoing health case studies of Capacity Strengthening of Least Developed Countries on Adaptation to Climate Change (CLACC), an initiative of southern organizations working on adaptation. He highlighted preliminary findings, including: low awareness of climate change impacts in the health sector; high burden of climate sensitive diseases in the least developed countries (LDCs), including malaria, diarrhoea, and malnutrition. He also noted difficulties in attributing observed changes in disease patterns to observed changes in climate and the underestimation of impacts of extreme weather events. Alam also point to the limited capacity for short-term and long-term preparedness strategies. He said a three-year study would be undertaken on salinity and health in the coastal area in Bangladesh to determine disease due to increased salinity.

George Kasali, Energy and Environmental Concerns for Zambia, discussed climate change and human health in Zambia. Noting increased frequency of droughts, as well as increased flooding, he highlighted the current disease burden including malaria, respiratory infections, and diarrhoea. He identified as challenges: a shortage of qualified health personnel; rising HIV/AIDS cases and lack of attention to other diseases; unsustainable health care financing; high maternal mortality rate; increased incidence of malaria and the high cost of mosquito nets; poor water and sanitation services; and poverty and unemployment. He highlighted the need for, *inter alia*: investment in preventive measures; capacity building in technical and scientific knowledge about climate as a driving factor in the prevalence of diseases; climate-proof water and sanitation facilities; strengthening existing health coping strategies in communities; and a more detailed analysis of climate-disease interaction for policy formulation.

Shafiqur Rahman, BCAS, discussed the relationship between climate change and the incidence of malaria in the Chittagong Hill Tracts in Bangladesh. He said the rate and risk of malaria is mainly affected by climate change, but that other non-climatic factors also influence them. Regarding rainfall and malaria, he said high rainfall areas may have higher rates and risk of malaria, but that excessive rainfall may actually wash away the larvae. He also highlighted that high humidity increases the life of the mosquitoes, and noted that in 2002, 598 malaria-related deaths were reported in Bangladesh, and that in 2005, 203 deaths occurred in the Chittagong Hill Tracts.

DISCUSSION: During the discussion, one participant questioned the low number of malaria-related deaths, sources of data, and measurement of incidence, and noted that the

vector reproduces in pools, which would be more relevant to study than rainfall. He said donors are not interested in funding malaria control in an area with such a low reported incidence rates. Another participant said drought in Sudan is a major cause of malaria due to storage of drinking water in which the vector reproduces. She also said because of war, people know very little about the disease. Participants also raised the issues of high margins of error in hospital data due to people's hesitance to report health problems, and continued use of DDT to fight malaria. One participant proposed holding stakeholder workshops and including institutions of higher learning to further research links between climate change and disease.

AFTERNOON PLENARY I: REPORTS FROM THE BREAKOUT GROUPS

Saleemul Huq reported back on salient points brought out during the first technical session on agriculture, drought and food security. He highlighted lessons emerging from the presentations and discussions, including the importance of institutional capacity building based on existing capacity in communities. He emphasized the need for practical action research to synergize indigenous knowledge with knowledge from the research and scientific community. He pointed to the use of information technologies to get information to villages, and the importance of investing in youth through education and training.

Reporting on the second technical session on agriculture, drought and food security, Jabavu Clifford Nkomo pointed to an emphasis on participatory approaches and the challenge of scaling up. He recalled comments on how projects often look good on paper but do not reach the poorest people, and that farmers' ownership and control over seeds should be key to adaptation policy. He also lamented that the presentations did not address economic implications of projects.

In her report from the technical session on extreme events, Madeleen Helmer highlighted the concern with increasing coherence and establishing a common language between the development, climate change adaptation, and disaster risk reduction communities. She reflected on the discussion on terminology and noted that while the focus on risk could be helpful, risk assessment is based on known risks, while the impacts of climate change are not always known.

Andrew Trevett reported back on the health and climate change group and noted that awareness of climate change health impacts is low, capacity of the public health sector is weak, and there is growing evidence of links between climate change and health.

PANEL DISCUSSION: Ainun Nishat, IUCN, Bangladesh, emphasized the need for a simple and direct message to attract the attention of policymakers in order to mainstream climate change issues into planning and decision-making processes. He noted some difficulties with traditional knowledge in that, for example, some strains of rice traditionally used are less flood and drought resistant. He suggested a monitoring mechanism to track malaria incidence, paying more attention to the poor, and finding common ground between mitigation and adaptation activities, using tree plantations as an example.

Daniel Coppard, UNDP Human Development Report Office, lamented that poor areas have not been a priority for government action, and that government action and development investment is based on economic rates of return rather than on human development and welfare. He said that civil society organizations address the needs of the poor where government has failed, but that community-based adaptation cannot operate in a vacuum, and that efforts must be coordinated, and government agencies and service providers

engaged. He emphasized removal of key structural barriers, such as insecure land tenure systems. He pointed to limits to adaptation, and stressed the need for committed policy action from governments, civil society and the international community.

Cristina Rumbaitis del Rio, Rockefeller Foundation, focused on the need for costing adaptation and documenting its economic benefits, and pointed to the importance of incorporating powerful constituencies that stand to benefit from it, such as insurance companies. She said that many adaptation challenges will occur in urbanized areas, something which will require closer collaboration with local governments on infrastructure issues, and suggested there might be lessons to be learned from other policy processes, such as those from HIV/AIDS.

DISCUSSION: During the discussion, participants expressed concern that work on adaptation had recently been concentrated in developed countries, which further exacerbated inequity in the world. Noting knowledge gaps in how vulnerabilities are affected by gender, one participant raised potential synergies between supporting women and enhancing adaptive capacity.

MORNING PLENARY II: MAINSTREAMING AND PARTNERSHIP

REPORTS FROM THE FIELD: Ian Burton chaired the session.

Ray Kancharla, Christian Aid, India, provided reflections from the site visit to northwest Bangladesh, to areas affected by flood and river erosion. He noted that one of the villages visited used to be inhabited by 239 families, but now only 38 families remain. He conveyed the stories of Shirin, who had to move her house numerous times because of flooding, and of Azmul Hussain, whose grandfather had 90 acres in what is now the river, and who has less than 90 square meters. He also noted some dissatisfaction with micro-credit due to high interest rates. Questions raised included to what extent flooding and erosion are due to climate change, if mitigation should be a concern for Bangladesh, and whether displacement and migration reflect weakness or adaptive capacity.

Roger Jones reported on the site visit to a region in south-central Bangladesh affected by floods and water logging. He said water logging is related to the amount of time water spends in a place and then recedes, which affects the number of crops that can be grown each year. He described techniques that increase productivity and even lead to crop surpluses, and allow families to relocate during flooding. He said the fact that communities are dealing with problems on a piecemeal basis illustrates a broader pattern of problems that need to be addressed.

Johannes Chigwada, Zimbabwe Environmental Regional Organization (ZERO), reported on the field trip to a salinity- and cyclone-prone area on the southwest coast of Bangladesh. He described a visit to a shrimp farm and how the group learned about environmental education programmes in schools, riverbank protection through mangrove planting, integrated agriculture, and improved, portable cooking stoves. He highlighted drama as an awareness tool after a community performance on climate variability, and the role of NGOs as external agents providing technology for improving living standards and strengthening adaptive capacity.

Anders Granlund, Swedish International Development Cooperation Agency (SIDA), presented on the field trip to a drought prone area in northwest Bangladesh by showing a video clip. Highlighted issues included a successful government irrigation scheme that has led to increased productivity and improved livelihoods, and institutional



Panel discussion on mainstreaming and partnerships (left to right): Ivan Biot, Department for International Development (DFID), Stephen Gitonga, Global Environment Facility (GEF) Small Grants Programme (SGP), Ian Burton, IPCC lead author, and Annelieke Douma, Bothends, the Netherlands

constraints and the problem of land tenure. The video also drew attention to how knowledge of climate change can facilitate action that will enhance adaptive capacity.

PANEL DISCUSSION: Ivan Biot, Department for International Development (DFID), UK, noted that people living in poverty have tremendous coping mechanisms but these do not necessarily represent advances, and stressed that adaptation is essentially development that results in improvements in peoples' lives. Using as an example the case of irrigation leading to increases in crop yields and reduced vulnerability to rainfall variability, he drew attention to the role of science in the face of adaptation limits, noting that community-based adaptation might not always be sufficient.

Stephen Gitonga, Global Environment Facility (GEF) Small Grants Programme (SGP), noted \$50 million had been earmarked by the GEF Strategic Priority for Adaptation for testing and piloting adaptation programmes, 10% of which will go towards the SGP Community-Based Adaptation Programme. He emphasized the importance of mainstreaming adaptation into the development process, and said government assistance is critical for community survival over the long term. He said national and regional activities must be linked with community-based adaptation, noting for example that rivers cannot be controlled without regional cooperation. He advocated lobbying governments to push adaptation onto the political agenda and building institutional capacity. He underscored the importance of costing adaptation activities, and developing tools for monitoring and evaluating adaptive capacity to measure community success. He said the 15th session of the Commission on Sustainable Development (CSD-15) and UNDP's Human Development Report, both of which will address climate change this year, present opportunities to bring adaptation to the international agenda.

Annelieke Douma, Bothends, the Netherlands, drew attention to similarities with gender issues, stating that awareness is key but that the real challenge lies in implementation. She said mainstreaming is necessary but not sufficient, since adaptation will require additional funding. She also emphasized peer learning as a powerful tool, the need to start stakeholder processes and address policymakers, and the importance of reaching out to youth.

DISCUSSION: In the ensuing discussion, participants addressed the problem of land tenure and commended the GEF's SGP. Participants also discussed the need to keep in mind social inequities existing within a community and not take for granted its cohesion.

MAINSTREAMING AND PARTNERSHIPS

This session was chaired by Anders Granlund.

Ahsan Uddin Ahmed, Centre for Global Change, Bangladesh, discussed challenges towards mainstreaming adaptation in water and agriculture sector development in Bangladesh. He stressed the need for more emphasis on

community-based flood management, engaging in effective policymaking at the regional level, and safeguarding investments in development. Identifying challenges for mainstreaming adaptation, he advocated defining vulnerability “through the eyes of the vulnerable.” In presenting a framework for mainstreaming, he emphasized harmonization of policies, inter-agency collaboration and integration, safeguarding development schemes in water, and climate-resilient development.

Saleemul Huq discussed the importance of mainstreaming, and distinguished between mainstreaming at the international level and at the national and local levels. At the international level, particularly under the UNFCCC, he said adaptation is addressed in terms of human-induced climate change, as opposed to climate variability, and described various funds established for adapting to climate change. At the national level, he said mainstreaming is the most effective means of incorporating knowledge and risk into development planning, highlighting national adaptation programmes of action (NAPAs) as the first systematic effort to mainstream adaptation into national activities. He highlighted successes at mainstreaming within some sectors, particularly agriculture, water and coastal zone management. He noted difficulties regarding the local/community level, where he said risk reduction is the entry point, vulnerability analysis is key, and building resilience to future climate change and climate variability is the goal. He emphasized the importance of and difficulties in building the trust of communities, and stressed using intermediaries such as NGOs. He highlighted efforts at IIED to integrate climate change into other programmes, and said mainstreaming adaptation into development is essential, although not easy in practice, and requires time and patience, additional funding, knowledge and technology.

Moinul Islam Sharif, UNEP Risø, Denmark, discussed the Danish climate and development action programme and initial experiences from Vietnam, Mozambique and Tanzania. He emphasized the strong relationship between development and climate change, illustrated by the fact that various ministries are addressing the issue. He lamented a lack of coordination between agencies working on climate change, and exclusion of socioeconomic aspects in the studies. He said that in all three cases national institutions are interested in being involved in climate change activities, highlighting examples in the water and agricultural sectors, but he noted very little cross-cutting work on climate change. He stressed the need for collaboration between national and international actors, and building stronger capacity for economic analysis.

Heru Santoso, Center for International Forestry Research (CIFOR), Indonesia, addressed linking different perspectives on adaptation for mainstreaming into the development agenda, specifically government versus community perspectives. He noted varying adaptive capacities, divergent views on climate change and different priorities. He said mainstreaming adaptation requires intersectoral support from all relevant government institutions, and stressed linking community and government



Improved efficient cooking stoves can be easily moved during flood seasons.

interests through dialogue and negotiations and connecting solutions to current problems with long-term objectives to increase resilience.

Ramon Faustino Jr., Conrado Benitez Institute for Sustainability, the Philippines, discussed mainstreaming community-based adaptation strategies into integrated coastal management in Cavite City in the Philippines. He highlighted the adaptive capacity of coastal communities and described many adaptation strategies, but noted they are not effectively integrated into existing local development plans. He outlined a proposed framework for mainstreaming community-based adaptation, which includes: institution building and social mobilization; risk assessment; adaptation strategy formulation; strategy implementation and evaluation; community and multi-stakeholder participation in integrated coastal management; and community adaptive capacity development and enhancement. Looking forward, he called for, *inter alia*, establishing community-based monitoring and surveillance systems to measure changes in coastal areas as inputs to assessment and planning and setting-up of community early warning systems.

DISCUSSION: In the ensuing discussion, one participant noted that, while adaptation is a development issue, it is also an environmental issue, and questioned the where links between adaptation and environmental degradation fit into the mainstreaming discussion. Another participant sought to identify the triggers of change, noting that building arguments is not enough, while another reiterated the idea of looking at vulnerability through the eyes of the vulnerable. Other issues raised addressed include: marrying long- and short-term strategies; using NGOs as intermediaries; and the importance of knowledge dissemination. One participant said that market forces are exacerbating the vulnerability of poor. Saleemul Huq suggested looking at successful models such as the water sector in Bangladesh, which has incorporated climate change as part of its national water plan. He reiterated the need to be opportunistic in this regard and stressed the importance of timing when attempting to integrate the issue of climate change into other sectors.

TOOLS AND METHODS

This session was chaired by Pablo Suarez, Red Cross/Red Crescent, the Netherlands.

Ajaya Dixit, Institute for Social and Environmental Transition, Nepal, reported on a study being undertaken in Nepal linking adaptation concepts to field realities. He explained the three components of the study: research on local practices, piloting adapted approaches, and outcome mapping and synthesis. He reviewed key concepts, including hard resilience, such as dams, and soft resilience, such as the social ability to absorb change. He stressed the need to recognize critical threshold issues and the importance of participatory approaches.

Mizan Khan, North South University, Bangladesh, presented on climate risk and crop insurance in Bangladesh. He mentioned a new model of weather insurance used in Malawi based on occurrence of weather events rather than actual losses, and noted that experience with micro-insurance is limited and that schemes are mainly targeted at low-income – not the poorest – people. He addressed gaps and challenges of crop insurance, including high administration costs and the fact that loans are not financially viable without government support.

Umme Kulsum, Network on Climate Change in Bangladesh, spoke about community responses to an awareness-raising campaign on climate change in Bangladesh. She described



This boy is standing in the middle of the dry river bed of the Brahmaputra river. During the rainy season, the river flows up to the top of the embankments.

campaign and training materials, school programmes and community initiatives. Noting participation in a rally and media responses, she highlighted the importance of lobbying and advocacy.

Yvani Deraniyagala, Munasinghe Institute for Development (MIND), Sri Lanka, presented the Adaptation Impact Matrix (AIM) tool, developed to assess vulnerable areas and how impacts on these might affect national development goals and policies and vice-versa. She noted links between climate change and sustainable development and the need for an integrated strategy at the country level.

Suruchi Bhadwal, The Energy and Resources Institute (TERI), India, focused on a World Bank study to identify means to enhance the coping capacities of communities in cases of drought and floods based on three river sub-basins in India. She highlighted, *inter alia*: the importance of income diversification in maintaining household wellbeing during climate-stressed years and the role of education in increasing peoples' ability to diversify; and the need for access to credits and loans as well as to institutions and social networks.

DISCUSSION: In the ensuing discussion, participants addressed various aspects of the AIM tool, including how scoring was established and whether it was based on expert judgment. Deraniyagala explained that it was a very qualitative and participatory exercise that could be brought to the community level and provide a link to national goals and priorities.

Participants also addressed the question of moral hazards in the case of insurance, and that without crop subsidization, crop insurance is not viable. One participant noted that the natural reaction of the private insurance sector to climate change is to increase premiums and introduce exclusions, but noted benefits in that the higher insurance rates increased awareness and served as incentives to precautionary measures, indirectly leading to positive behavior. On private sector involvement, Khan pointed to the need for calculability of risks to set premiums, but noted lack of data regarding climate change impacts at the community level.

EXTREME EVENTS II

This session was chaired by Madeleen Helmer.

Terry Cannon, University of Greenwich, UK, spoke about the role of participatory community risk assessment. Noting the low death rate of sudden-onset disasters compared to other causes of death, including easily preventable diseases in "everyday life," he underscored the need to take into account peoples' priorities and said emphasis needs to be on trends

rather than shocks and disasters. He stressed that adaptation is about strengthening livelihoods and drew attention to awareness of power at all levels.

Arifin Hadi, Red Cross, Indonesia, described the Red Cross's attempts at incorporating climate change into its programmes in Indonesia. He described a pilot programme addressing floods in Jakarta, which includes measures such as clean water storage with pipe upgrade systems, replanting in erosion-prone areas, and reducing vulnerability to dengue fever though cultivating fish that eat mosquito larvae. He emphasized local capacity and participatory planning and the need to reach out to youth and increase awareness of adaptation among local government and community leaders.

Rabi Uzzaman, BCAS, presented on a study on floods in Bangladesh aimed at understanding existing coping strategies. He reviewed how the sites had been selected and what the perception and impacts of floods were. He explained the studies' categorization of good, bad and innovative practices, identifying kasban plantations and raising the height of houses and graveyards as examples of the latter.

Firouz Ibromovm, CARE, Tajikistan, spoke about a participatory assessment pilot project in mountain communities of Tajikistan. He underscored links between mitigation and adaptation through the deployment of energy efficient technologies, such as efficient stoves, winterization of village schools using locally available materials, and stabilization of slopes through tree planting. He highlighted partnerships with local NGOs and with local government and institutions.

DISCUSSION: In the ensuing discussion, participants addressed: greater vulnerability of women and children due to urban migration by men; the need for emergency assessments; the consequences of longer winters; and the need to engage governments to ensure sustainability of projects.

COMMUNICATION AND KNOWLEDGE

Kees Leendertse, Cap-Net/UNDP, chaired the session.

Pablo Suarez discussed participatory video. He video is vastly underutilized, and demonstrated what it has done and can do for adaptation. Outlining the various roles video can play, he identified: targeted advocacy at the macro level; participatory processes at the micro level; linking micro and macro levels through training and capacity building; and inspiring change. Suarez said video can reach the hearts and minds of people, and create processes of dialogue across institutions that would not happen otherwise. He provided an example of how a participatory video workshop led to a climate change video competition in the Bahamas, the winner of which will launch a hurricane preparedness video.

Abdul Shakoor Sindhu, Practical Action, Pakistan, highlighted challenges faced in communicating problems related to adaptation and climate change, pointing to, *inter alia*: illiteracy; indifference of civil society; local governments' lack of awareness; and budgetary constraints for communication, awareness and advocacy. He described various creative communication tools being used to overcome these constraints, including: peoples' parliaments, story nights and oral communication, open discussions, cultural events, audio and video documentaries, and education in schools. He noted these tools are cost effective, informal, non-hierarchical, and well received by the communities, and that they inspire discussion on the issues.

Thais Corral, SouthSouthNorth (SSN), Brazil, showed a video providing an overview of projects in various countries, such as energy efficient houses in the townships in South Africa. She said SSN aims to bring sustainability to projects under the Kyoto Protocol's flexible mechanisms.

Mark Hertsgaard, author and journalist, US, discussed media and climate change, emphasizing that adaptation is not on the public radar. Noting lack of discussion at the workshop on how to reach the media, he urged participants to spend more time and attention communicating to the media, because of its impact on what happens and its ability to reach people. He identified radio and television as powerful tools of social communication, and advocated formulating communication strategies at the beginning of the project cycle and developing a language comprehensible to people outside the climate change community. He said a window of opportunity currently exists for spreading the adaptation message.

DISCUSSION: Participants discussed how to move beyond the clichéd images of the poor and vulnerable as victims, and whether “rebranding” the term climate change for the general population would be beneficial or would result in a loss of momentum. One participant noted that scientists are not always the best communicators, to which Hertsgaard suggested hiring media coaches to improve communication skills. Another participant highlighted a successful programme training environmental journalists. Corral reiterated that the most effective tool at the community level is radio, while another participant underscored limitations of mass media in developing countries.

AFTERNOON PLENARY II: REPORTS FROM THE TECHNICAL SESSIONS

Richard Klein chaired this session.

Anders Granlund reported back on the technical group on mainstreaming and partnership, providing an overview of the presentations. He suggested looking at other sectors with successful experiences in mainstreaming such as with HIV/AIDS. He pointed out that the presentations did not address partnerships, and emphasized the importance of partnerships between, *inter alia*, donors, the scientific community and the private sector.

Pablo Suarez reported on the technical session on tools and methods, stressing that supporting adaptation information flows is essential and highlighting the importance of activism and advocacy. He noted that different tolerance levels makes assessment of what constitutes a dangerous level of greenhouse gas concentrations relative.

Madeleen Helmer summarized the second technical session on extreme events, noting different understandings of vulnerability and the challenge of linking climate change and disaster risk reduction.

Kees Leendertse reported on the session on communication and knowledge, emphasizing the need to reach the hearts as well the minds of people. He highlighted the power of video as a communication tool, and other creative communication methods, particularly with respect to illiterate communities and constrained budgets, and stressed the importance of creating momentum in the media on the issue of adaptation.

PANEL DISCUSSION: Ian Rector, Comprehensive Disaster Management Programme, Bangladesh, highlighted, *inter alia*: the importance of involving regional, national and international governments as well as communities; the need for micro-impact analysis since modeling requires a lot of time; and the importance of convincing people that acting now will have an impact on the future.

Noting that the increased media attention on climate change provides an important opportunity to act, Mark Hertsgaard suggested addressing how to fit the workshop into broader adaptation efforts.



Azmul Hussain explains how his grandfather had 90 acres of land in what is now the river, and now he has less than 90 square meters of land.

Rosa Blaauw, SSN, South Africa, underscored that people have different ideas of mainstreaming, and highlighted the importance of linkages between the community and policy levels, effective communication, and integration with other sectors such as insurance, media and education. She noted limits to adaptation and urged more dialogue between developed and developing countries.

Mohammad Reazuddin, Bangladesh Ministry of Environment and Forestry, cautioned against excluding the development community when addressing community-based adaptation. On mainstreaming, he said communication strategies would be different for planners, policymakers, communities and the media, and emphasized the need to develop a climate-resilient development framework to pre-empt dictation from the donor community.

DISCUSSION: Saleemul Huq reiterated that community-based adaptation is gaining more prominence at the international level, and noted fears that as it gets promoted internationally, the poorest and most vulnerable will be forgotten. He said the workshop should be regarded as a mutual capacity-building workshop. Participants also addressed the role of NGOs in bringing about positive change by working with people, and how relatively small actions can bring about important changes. They also discussed how to take advantage of the current media attention. In response to a question about what kind of products or format would be useful in this regard, Hertsgaard stressed the importance of a good story and suggested that focusing on individuals is often most effective.

FINAL DISCUSSION PANEL

The final panel was chaired by Atiq Rahman.

Saleemul Huq announced agreement on the formation of a community-based adaptation network (CBA Network) following a survey taken by workshop participants. He presented participants with a draft summary report of the workshop and asked them to include in their feedback recommendations for the ways forward.

Terry Cannon noted that there are three forms of adaptation: one is merely coping; another is development; and a third more specific one that, besides development, entails addressing problems related to climate change, such as new diseases and the need for drought-resistant seed varieties. He called for clear strategies and understanding of the knowledge required for the latter. He also suggested asking what an adaptive community would look like, what would initiate it, and what resources it would require, and underscored the need to address barriers preventing progress already existing in

development. Cautioning against top down and externally-driven processes, he urged ensuring that the knowledge that needs to be transmitted is easily translatable and practical. He also addressed scaling-up and how to expand participatory processes.

Rachel Berger stressed partnerships and reaching out. She focused on the need for improvements in agricultural technology, noting the huge challenges resulting from increased concentrations of power in the agro-industry, and said what is needed is diversified, resilient agriculture. She called for addressing funding for the “right kind” of agriculture, using diplomacy, working with agricultural departments, mobilizing civil society and engaging big business.

Anders Granlund presented the donor perspective, reiterating that the existing window of opportunity to make an impact will not be open for long, and urged the workshop participants not to lose momentum. He noted a shift in how donors are working, and said donors need to act as a broker between stakeholders and financial and other resources in society, underscoring the role the private sector could play. He stressed engagement with non-traditional players, such as health specialists, the media and the military, and emphasized the importance of educating children and the practical use of information and communication technologies.

Cynthia Awuor, African Center for Technology Studies (ACTS), Kenya, said many lessons and technologies from Bangladesh can be shared and implemented in her country. She said NGOs are well positioned, particularly at the grassroots level, to engage in capacity building, and said participatory processes should be strengthened. She suggested marrying top-down and bottom-up approaches, synthesizing information from the communities and from researchers and scientists, and establishing monitoring and evaluation systems. She stressed the importance of communication, such as simplified messages to local communities, strengthening partnerships and institutional capacity, and information exchange through the internet and workshops.

Calling for a holistic approach, Festus Luboyera, UNFCCC Secretariat, warned that as climate change impacts increase, funding may be diverted to projects in developed countries and not reach those in developing countries that need it most. He therefore stressed the need to ensure accessible and predictable funding. He drew attention to the NAPA process, which addresses immediate needs, and suggested exploring ways of expanding it to non-LDCs and strengthening methodologies for adaptation needs assessments. He also underscored the need for synergies with other processes and better coordination with development objectives.

DISCUSSION: Atiq Rahman opened the floor for discussion and recommendations, during which participants made many recommendations, including:

- including an element of growth in the definition of adaptation so communities are not forever caught up in the poverty cycle;
- incorporating a human rights perspective into the process;
- raising the status of women in projects;
- focusing on low-cost appropriate technology;
- not reinventing the wheel;
- promoting multi-stakeholder dialogues around climate change adaptation by development practitioners;
- not losing sight that mitigation must remain a priority;
- producing marketable goods and services rather and lessening dependence on donors for assistance;

- developing easy-to-use guidelines for organizations;
- identifying what to fund and how much it will cost;
- linking NGOs with research institutes and institutions of higher learning;
- lobbying the ministries of education to include adaptation in school curricula and in teacher training programmes;
- improving coordination and partnerships among and between various stakeholders;
- informing and educating local communities about climate change and its impacts;
- addressing issues of equity and redistribution of resources;
- engaging social movements at the local level, and undertaking civil society actions and campaigns;
- more funding for action research and small-scale funding to replicate strategies;
- building negotiating capacity;
- involving communities in the decision-making process;
- developing action plans, with targets and indicators;
- staying focused on community-based adaptation, noting what can be achieved and what timelines would be needed;
- engaging national and regional governments, and ensuring resources in these budgets; and
- sharing information and experience through a portal or database.

CONCLUDING SESSION

The concluding session commenced with a recitation from the Holy Quran.

Quoting a Los Angeles Times article noting that “global warming has the taste of salt,” Chair Atiq Rahman drew attention to the severe impacts of climate change in Bangladesh and elsewhere, and said that although mitigation is essential, adaptation to climate change will be necessary among the poor communities that are most vulnerable.

Mohan Munasinghe, IPCC Vice-Chair, discussed, *inter alia*, recent IPCC findings, and said climate change is going to exacerbate problems related to development, poverty and food security. He noted climate change is not just a development issue but an environmental issue as well, and said it will affect sustainable development, and that how we develop will affect climate change. He underscored a lack of certainty over what level of mitigation should be the goal to keep concentrations below dangerous levels, and said even with mitigation, the temperature will continue to rise and adaptation will be required. Munasinghe emphasized climate change policies that combine both adaptation and mitigation, urged using the high profile climate change has gained for maximum benefit, and called for integrating climate change into sustainable development policy and making climate relevant to people so that it does not remain an isolated topic.

Madeleen Helmer noted that climate change is a science-driven subject that is not easily accessible, but that there are also other “weather experts” at the local level that experience how climate has changed, and stressed the need to work with these two sources of knowledge. She added that erratic climate changes are most damaging even though they are not well documented, and that, unlike rural communities in poor countries, developed countries are well prepared to adapt. She concluded that climate change is a global issue with local impacts, and that from a humanitarian perspective, inaction is not an option.

Saleemul Huq said it was important to hold the workshop in Bangladesh and bring participants to the field. He noted various interpretations of community, and clarified that for community-based adaptation refers to the poorest,

most vulnerable communities. He said that most of these communities exist in the south, but that vulnerable communities exist in the north as well, using those impacted by Hurricane Katrina as an example.

He said the workshop focused on four major themes:

- scaling up, i.e. replicating good practices being undertaken by communities in other villages and countries through developing methodologies, sharing information and working together;
- capacity building to make communities less vulnerable and overcoming bottlenecks in institutional capacity through informing institutions and incorporating climate change into their work so they can help communities;
- partnerships and mainstreaming, including partnerships at all levels, and ensuring funding goes to the most vulnerable, and that different constituencies include the risk factor of climate change in their work; and
- looking at the most effective ways to support community-based adaptation and finding out what communities need and assisting them according to their needs.

He concluded by drawing attention to the media's interest in the workshop, noting that it demonstrates the growing attention being paid to the issue.

Stating that climate change is a threat that reminds us of our common humanity, Steven Bridges, British High Commission, Bangladesh, called for action. He noted that the poorest countries will suffer not only the most but also the fastest, and referred to the Stern Review and its conclusion that there is still time to avoid the worst impacts. He said climate change is being increasingly factored into development programmes, and highlighted great interest in climate change amongst policymakers, particularly in the UK.

Noting the need to move the discussion to the international arena, Festus Luboyera identified fora and decisions within the UNFCCC process related to adaptation, in particular the 26th sessions of the Subsidiary Bodies and the UNFCCC Dialogue on long-term action, both taking place in May 2007. He explained the two key agenda items on adaptation: one involving regional workshops and expert meetings as mandated by decision 1/CP.10; and the Nairobi Work Programme on Adaptation, in which NGOs have been invited to participate. He explained that the outcomes of these meetings will feed into discussions at COP 13, where a decision on the way forward for adaptation is expected, and recommended briefing delegations and preparing inputs that could be used in these fora.

Chief Guest Chowdhury Sajjadul Karim, Advisor to the Agriculture, Fisheries and Livestock, and Environment and Forestry Ministries in Bangladesh, reiterated that inaction on climate change is not an option. He said we must not miss the wakeup call to take action and painted a bleak picture if Bangladesh is further submerged, leading to a doubling of population density, loss of agricultural products, and social disorder and chaos. He described a possible scenario in the future when people will talk about a country called Bangladesh that once existed long ago, and urged action now to avoid these future catastrophes. He called for assistance from the international community and for pooling knowledge and resources. He also underscored the resilience of people and said their hard-working nature and ability to face challenges with courage will help Bangladesh adapt.

Drawing attention to changes in the ecosystem, S.M. Jahurul Islam, Ministry of Environment and Forests, Bangladesh, suggested that nature may be responding to abuse by humans.

He said that it is the duty of those who know about climate change to share information and sensitize people on action they can take, and called for international organizations to collaborate and work on common policies.

Chair Rahman thanked workshop participants, high-level guests and the workshop organizing committee, and drew the meeting to a close at 1:20 pm.

UPCOMING MEETINGS

INTERNATIONAL CONFERENCE ON WATER AND FLOOD MANAGEMENT: This conference will address issues such as reducing vulnerability and developing resiliency against water related hazards and promoting participatory management, and will take place from 12-14 March 2007, in Dhaka, Bangladesh. For more information, contact: Tarekul Islam; tel: +880-2-9665601; fax: +880-2-8613046; e-mail: icwfm@iwfm.buet.ac.bd; internet: <http://teacher.buet.ac.bd/icwfm/index.htm>

FIFTEENTH SESSION OF THE UN COMMISSION ON SUSTAINABLE DEVELOPMENT: Building on the "review year" discussions at CSD-14, CSD-15 will convene from 30 April to 11 May 2007, in New York, US. For more information, contact: Division for Sustainable Development, Department of Economic and Social Affairs; tel: +1-212-963-8102; fax: +1-212-963-4260; e-mail: dsd@un.org; internet: <http://www.un.org/esa/sustdev/csd/policy.htm>

EIGHTH SESSION OF IPCC WORKING GROUP II:

The 8th meeting of the IPCC WG-II on adaptation will be held in Brussels, Belgium, from 2-5 April 2007. For more information, contact: Rudie Bourgeois, IPCC Secretariat; tel: +41-22-730-8208; fax: +41-22-7 30-8025/13; e-mail: IPCC-Sec@wmo.int; internet: <http://www.ipcc.ch/>

INTERNATIONAL CONFERENCE ON CLIMATIC CHANGES AND THEIR IMPACTS ON COASTAL ZONES AND RIVER DELTAS: VULNERABILITY, MITIGATION AND ADAPTATION: This conference will take place from 21-25 April 2007, in Alexandria, Egypt. For more information, contact: Conference Secretariat; e-mail: amkhater@yahoo.com; Internet: <http://www.ccie.eg.net/index.html>

NINTH SESSION OF IPCC WORKING GROUP III AND 26TH SESSION OF THE IPCC: IPCC-26 is scheduled for 4 May 2007, in Bangkok, Thailand, immediately following the 9th session of Working Group III, to be held from 30 April to 3 May 2007. For more information, contact: Rudie Bourgeois, IPCC Secretariat; tel: +41-22-730-8208; fax: +41-22-7 30-8025/13; e-mail: IPCC-Sec@wmo.int; internet: <http://www.ipcc.ch/>

26TH SESSIONS OF THE UNFCCC SUBSIDIARY BODIES AND THIRD SESSION OF THE KYOTO PROTOCOL AD HOC WORKING GROUP: SB-26 will take place from 7-18 May 2007, in Bonn, Germany, alongside the third session of the *Ad Hoc* Working Group on Further Commitments from Annex I Parties under the Kyoto Protocol and the third workshop of the UNFCCC Dialogue on Long-Term Cooperative Action on Climate Change. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

For more upcoming meetings, please visit: <http://www.iisd.ca/upcoming/linkagesmeetings.asp?id=5>