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UNFCCC TECHNICAL WORKSHOP ON INTEGRATING PRACTICES, TOOLS AND SYSTEMS FOR CLIMATE RISK ASSESSMENT AND MANAGEMENT AND DISASTER RISK REDUCTION STRATEGIES INTO NATIONAL POLICIES AND PROGRAMMES: 10-12 MARCH 2009

The Workshop on Integrating Practices, Tools and Systems for Climate Risk Assessment and Management and Disaster Risk Reduction Strategies into National Policies and Programmes was held from 10-12 March 2009, in Havana, Cuba. The workshop took place under the aegis of the Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change, which was established in 2006 under the UN Framework Convention on Climate Change (UNFCCC). The event was held in collaboration with the UN International Strategy for Disaster Reduction. Approximately 80 participants were in attendance, representing governments, UN agencies and constituted bodies, academia, and non-governmental organizations (NGOs). The meeting aimed to identify successful examples of using tools and integrating climate risk assessment and management and disaster risk reduction into national policies and programmes.

The workshop generated a number of recommendations regarding climate-related hazards, sectoral and national level planning. The report of the workshop will be presented to the thirtieth session of the UNFCCC's Subsidiary Body for Scientific and Technological Advice, which will take place from 1-12 June 2009, for its consideration.

A BRIEF HISTORY OF THE NAIROBI WORK PROGRAMME

Adaptation appears as a cross-cutting theme under the UNFCCC. Following the release of the Intergovernmental Panel on Climate Change's Third Assessment Report, the UNFCCC's ninth Conference of Parties (COP 9) in 2003 requested its Subsidiary Body for Scientific and Technological Advice (SBSTA) to initiate work on the scientific, technical and socioeconomic aspects of, and vulnerability and adaptation to, climate change (decision 10/CP.9). The following year, parties reached a milestone at COP 10 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).

In November 2006, COP 12 renamed the SBSTA five-year work programme the "Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change" (NWP). The work programme aims to assist countries, in particular developing countries (including the least developed countries and small island developing states), to improve their understanding and assessment of impacts, vulnerability and adaptation. It also aims to assist countries in making informed decisions on practical adaptation actions and measures to respond to climate change on a sound, scientific, technical and socioeconomic basis, taking into account current and future climate change and variability. To achieve these aims, the NWP

IN THIS ISSUE

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has nine areas of work, namely: methods and tools; data and observations; climate modeling, scenarios and downscaling; climate-related risks and extreme events; socioeconomic information; adaptation planning and practices; research; technologies for adaptation; and economic diversification. The expected outcomes of the NWP are:

- enhanced capacity at international, regional, national, sectoral and local levels to further identify and understand impacts, vulnerability, and adaptation responses, and to select and implement practical, effective and high-priority adaptation actions;
- improved information and advice to the COP and its subsidiary bodies on the scientific, technical and socioeconomic aspects of impacts, vulnerability and adaptation;
- enhanced development, dissemination and use of knowledge from practical adaptation activities;
- enhanced cooperation among all actors, aimed at enhancing their ability to manage climate change risks; and
- enhanced integration of adaptation to climate change with sustainable development efforts.

WORKSHOPS UNDER THE NWP: The UNFCCC Workshop on Adaptation Planning and Practices under the NWP was held from 10-12 September 2007, at the headquarters of the Food and Agriculture Organization of the UN (FAO) in Rome, Italy. The workshop focused on adaptation planning and practices, one of the nine areas of work under the NWP. The workshop identified action pledges from organizations to fill capacity gaps and address challenges in adaptation planning and practices. The workshop concluded with a number of recommendations for adaptation planning and practices, and action pledges from several organizations. The report of the workshop was forwarded to SBSTA 28, which was held from 2-13 June 2008 in Bonn, Germany.

The UNFCCC Meeting on Methods and Tools and on Data and Observations under the NWP was held from 4-7 March 2008 in Mexico City, Mexico. The workshop concluded with recommendations relating to methods, tools, data and observations, including assisting in their use and application, advancing their dissemination and experiences with their use; and promoting their development and improvement. Recommendations also focused on promoting implementation and improvements, and improving capacity for the collection, management, use and exchange of data and observations. The report of the workshop was forwarded to SBSTA 28.

The UNFCCC Meeting on Socioeconomic Information under the NWP was held from 10-12 March 2008, in Port of Spain, Trinidad and Tobago. The workshop generated a number of recommendations regarding: ways and means to improve the availability, accessibility and effectiveness of information on socioeconomic aspects of climate change; integrating socioeconomic information into impact and vulnerability assessments; and the application of socioeconomic information in the context of adaptation planning. The report of the workshop was forwarded to SBSTA 28.

OUTCOMES ON THE NWP AT SBSTA 28 AND SBSTA 29: At SBSTA 28, the NWP was the subject of extensive discussions in a contact group and informal consultations. In its conclusions, the SBSTA requested the UNFCCC Secretariat to organize, before SBSTA 30, a technical workshop on increasing economic resilience to climate change and reducing reliance on vulnerable economic sectors, including through economic diversification. The SBSTA also requested a technical workshop on integrating practices, tools and systems for climate risk assessment and management and disaster risk reduction strategies into national policies and programmes.

At SBSTA 29, which was held alongside COP 14 in December 2008, discussions on the NWP focused on identification of recommendations to be forwarded to the SBI for its consideration, and consideration of the need for a group of experts and its possible role. In its conclusions, the SBSTA, *inter alia*: invited parties to expand the roster of experts to ensure that all areas of expertise relevant to the NWP are represented; and provided the SBI, for its possible consideration, with information and advice emerging from the implementation of the first phase of the NWP, as contained in an annex to the decision text. The annex covers relevant information and advice to the SBI relating to methods and tools, data and observations; climate modeling, scenarios and downscaling; climate-related risks and extreme events; socioeconomic information; adaptation planning and practices; research; technologies for adaptation; and economic diversification.

REPORT OF THE WORKSHOP

The workshop opened on Tuesday morning, 10 March 2009. In his opening remarks, Jorge Chamero, Cuba's UNFCCC Focal Point, said the workshop presented an opportunity for enhancing cooperation, sharing experiences, and learning about integrating adaptation planning into national policies and programmes.

Gisela Alonso, Cuba's Environmental Agency, described the Agency's work in the study of hazards, vulnerability and disaster risk management.

SBSTA and Workshop Chair Helen Plume (New Zealand) noted the increasing need for adaptation to climate change, and stressed the NWP as a useful tool for achieving this.

Salvano Briceño, Director, UN International Strategy for Disaster Reduction (UN/ISDR), stressed that climate change adaptation and hazard risk reduction are intertwined, and that both can be better achieved if prioritized and undertaken together.

Roberto Acosta, UNFCCC Secretariat, noted that disaster reduction is an important area for adaptation planning. Underscoring that some events, such as hurricanes and droughts, are expected to intensify in the future, he highlighted the importance of expanding, replicating and integrating experience and tools used by parties. He said the workshop would facilitate discussions related to the effective use of resources for adaptation, and would foster knowledge sharing among parties as a means to enhance adaptation actions and policies.

SESSION ONE: INTRODUCTORY SESSION

Xianfu Lu, UNFCCC Secretariat, explained that the NWP is a five-year programme to assist all parties, particularly least developed countries (LDCs) and small island developing states (SIDS), to improve their understanding and assessment of impacts, vulnerability and adaptation to climate change, and make informed decisions on practical adaptation actions and

measures to respond to climate change. She underscored the challenge of translating the knowledge shared among parties into concrete adaptation actions.

Andrew Maskrey, UN/ISDR, outlined the preliminary results of the Global Assessment Report on Disaster Risk Reduction (DRR), which will be launched in May 2009. He said the report presents a new model for assessing global disaster risk from tropical cyclones, floods and landslides, with a specific focus on mortality and economic risks. He said addressing the underlying drivers of risk, such as urban governance, ecosystem decline and vulnerable rural livelihoods, are key to reducing disaster risk and achieving the Hyogo Framework for Action. He urged the development of national policy frameworks that link DRR strategies under the Hyogo Framework with climate change adaptation and poverty reduction strategies. He added that these frameworks should focus on addressing the underlying risk drivers, be actionable and support local initiatives.

A technical paper on integrating practices, tools and systems for climate risk assessment and management and DRR strategies into national policies and programmes was jointly presented by Paul Venton, independent consultant and Jeremy Collymore, Caribbean Disaster Emergency Response Agency. Venton highlighted, *inter alia*, that: states have the primary responsibility for adaptation and DRR; adaptation and DRR should be integrated into development activities; a multi-hazard approach can improve DRR effectiveness; and gender is a key factor for improving adaptation capacity and DRR.

Regarding support to LDCs and SIDS, Collymore outlined the importance of support for national planning for adaptation, streamlining and scaling up, and finance and technical support. He also underscored the need for: better knowledge of existing funding mechanisms and access protocols; engaging the private sector; technical cooperation among developing countries; creating risk transfer mechanisms; and establishing regional centers of excellence.

SESSION TWO: AVAILABLE TOOLS AND EXPERIENCES FROM CURRENT PRACTICES FOR FACILITATING INTEGRATION

During this session, participants heard presentations and discussed experiences at the international and regional levels. This was followed by consideration of national experiences.

INTERNATIONAL AND REGIONAL EXPERIENCES: Maryam Golnaraghi, World Meteorological Organization (WMO), described WMO's work on disaster preparedness, including coordinating a global network for hazard detection and forecasting. She outlined three tools being developed by WMO to assist countries to manage disaster risks, including: guidelines on hazard monitoring; improved early warning systems, including through identifying good practices and developing guidelines; and provision of financial risk transfer markets.

Bo Lim, UN Development Programme (UNDP), said UNDP's approach is to promote early adaptation actions and long-term adaptive capacity for developing countries. On DRR and climate change adaptation, she highlighted aligning the two using both top-down/supply-push policies, and bottom up/synergistic policies. Susan McDade, UNDP, described the cooperation between UNDP and the Cuban Government in DRR, such as through housing recovery, strengthening early warning systems, and capacity building for key actors and the public.

Christopher Oludhe, Climate Prediction and Application Centre at the Intergovernmental Authority on Development (IGAD), noted that extreme climate events in the IGAD region of Eastern Africa are generally followed by loss of life and property. He explained the Centre's strategy to deal with such events, including: prediction services for early warning systems; capacity-building training and research; and a climate outlook forum for enhancing interactions between climate experts and sectoral users of climate information and prediction services.

Mozaharul Alam, Bangladesh Centre for Advanced Studies, underscored the importance of advancing sustainable development by applying scientific, technical and local knowledge. He pointed out the importance of public and private partnerships, and the interaction of science, policy and local knowledge. Alam described a tool called LOCATE that helps to design community-based adaptation policies and connect different stakeholders.

Carlos Fuller, Caribbean Community Climate Change Centre, presented the experiences of the Caribbean region in responding to adaptation and integrating DRR, with a focus on building the knowledge base, creating an enabling environment, and implementing projects on the ground. Thomas Tanner, Institute of Development Studies (IDS), said that IDS and the International Institute for Sustainable Development (IISD) are undertaking a stock-taking assessment on how integration tools are being used by development agencies to climate-proof or mainstream DRR in development cooperation.

The World Health Organization (WHO) highlighted the World Health Assembly's recent climate change resolution, which mandates the WHO to engage with the NWP and develop tools related to climate change and health and implement adaptation projects. He urged interaction and cooperation across ministries to assess vulnerability and identify adaptation interventions for the health sector.

In the ensuing discussion, participants discussed the quality of information and projections being used by regional climate centers. Some participants stressed the importance of partnerships and leveraging resources in a coordinated manner with governments and relevant national departments. Participants also highlighted the need to communicate information to users, using less technical and scientific language.

NATIONAL EXPERIENCES: Ramon Pérez, Cuba, outlined Cuba's risk management efforts, including public education and awareness raising, early warning systems, accessible information systems, an established and structured response system. He described Cuba's climate monitoring system and gave examples of its work, such as analysis of rainfall behavior in Cuba, and information products, including climate monitoring bulletins, special climate advisories and summaries, and a website.

Guy Midgley, South Africa, presented South Africa's policy framework for extreme events, and stressed the establishment of disaster management centers in each province. He also

described the global change risk and vulnerability atlas launched by the Department of Science and Technology to bridge the gap between climate change science and policy in South Africa.

Dadang Hilman, Indonesia, said the country has taken measures to make DRR a national and local priority by: enhancing legislation, policy and strategy; establishing relevant institutions; and allocating budgets for all phases of disaster management. He noted the importance of integrating mitigation and adaptation aspects with social and cultural aspects. Hilman highlighted the need for additional resources and for integrating adaptation issues into the development planning process.

Gerd Tetzlaff, Chairman of the Scientific Advisory Board of the German Committee for Disaster Reduction, noted the importance of local community and climate forecasts to manage and prevent disasters. Underscoring that damages from major disasters in Germany have different impacts depending on the size of the area affected, he highlighted the importance of decentralization when dealing with such disasters.

SESSION THREE: INTEGRATION OF CLIMATE RISK ASSESSMENT/MANAGEMENT AND DRR INTO NATIONAL POLICIES AND PROGRAMMES

On Wednesday, participants met in three breakout groups to address the integration of climate risk assessment/management and DRR into national policies and programmes in the context of (i) climate-related hazards; (ii) sectoral approaches; and (iii) activities at various levels of government. Each group was tasked with responding to questions directed at stocktaking of current tools and practices, and options for further action.

In relation to stocktaking, the groups addressed different tools/approaches for assessment and integration, the factors enabling success of applications of such tools and practices, and the challenges and gaps beyond those identified in the technical paper.

In relation to options for further action, the groups considered the most promising opportunities for replication of identified examples from the morning session, possible areas of action to address the gaps/challenges for integration, and implications for national adaptation planning.

GROUP I: CLIMATE-RELATED HAZARDS: This group was co-facilitated by Leon Charles, Charles and Associates, Inc., and Glenn Dolcemascolo, UN/ISDR. Participants decided to first identify the most common hazards that require risk assessments, including hurricanes, landslides, sea-level rise, temperature rise, forest and rural fires, and droughts.

Cuba, WMO, Sweden, China, the UK, Denmark and Timor Leste outlined tools and methodologies that were useful for implementing DRR and climate change policies. These included: planning for civilian evacuation; mapping past disasters and forecasting future ones; elaborating adaptation plans that take into account different sectors; downscaling scenario analyses for different levels of risks; developing early warning systems; building partnerships among stakeholders; promoting national integration by elaborating coordinated policy frameworks; motivating developers to carry out risk assessments; raising public awareness to inform decision makers and citizens; elaborating and providing web manuals on what action each individual can take to prepare for hazards; incorporating DRR and climate change issues into formal education; and elaborating meteorological maps for different hazards and including such information in development plans.

Cuba said the regional hurricane warning systems, which are linked to national systems in the Caribbean and Central America, have helped reduce the loss of life across in the region. Many participants pointed out that indices, models and protocols need to be fully-integrated into national development policies.

Other participants highlighted the importance of a legal framework to allow implementation of DRR and climate change measures. Many underscored constraints to developing these methodologies and practices, such as the need to include information about costs on socioeconomic data related to vulnerability, rather than hazards, and develop enforceable legislation for DRR and climate change actions. Participants also highlighted successful tools and practices, including national simulation exercises and multi-stakeholder approaches.

On identifying opportunities for replication of successful examples and potential actions to address gaps and challenges, participants highlighted the importance of, *inter alia*: elaborating legislation that incorporates climate change issues, such as adaptation and DRR; inserting risk-related capacity in national communications under the UNFCCC; establishing national committees to deal with climate change and DRR; planning for hazard preparedness and prevention, including mapping and support for local-level management; establishing post-disaster strategies; establishing indicators and a feedback mechanism to enhance coordination across national and local levels; identifying civil defense needs to cope with hazards; and developing, regulating and enforcing building codes that take into account climate change aspects.

GROUP II: SECTORAL PLANNING: This working group was co-facilitated by Thomas Kolly, Switzerland, and Madeleen Helmer, International Federation of Red Cross and Red Crescent Societies.

In relation to the stocktaking of current tools and practices, discussions focused on best practices, information and knowledge sharing. A representative from Business and Industry NGOs (BINGOs) underscored the need for the business community to engage in adaptation planning, including allocating resources for planning processes.

South Africa said DRR was a natural entry point for climate change adaptation, suggesting that in retrospect the NWP should have started with DRR in its first phase. Highlighting that international agencies and countries have been working on DRR without considering climate change, WHO outlined the development of tools for environmental risk assessment and for assessing the burden of disease. Canada noted the small number of definitive success stories, but stated that there are a number of approaches that appear to be heading in the right direction.

Grenada spoke about the development of its national adaptation process and how it was integrated into the national budgeting process, particularly tools to examine national projects in the context of climate proofing. She said public awareness and high-level political support were crucial steps in integrating climate change into national processes.

The Cook Islands said stable governance and more concerted action from politicians are needed. Sri Lanka noted the cost of disaster prevention and the problem of lack of progress in building community resilience. The World Bank said risk assessments should assess the hazard and the level of vulnerability, and combine the two to get an approximate risk. However, he added that the overall determination of acceptable risk is a political decision.

South Africa highlighted the ability to communicate the statistical risks of extreme events as a key tool. Grenada stressed the importance of awareness among key sectors to ensure engagement. Sudan emphasized the lack of cross-sectoral coordination at the policy, strategy development and implementation levels.

Canada, Thailand, Cook Islands and Sri Lanka stressed the promotion of a culture of adaptive management. BINGOs urged the development of software tools to incrementalize adaptation costs at a project level, in order to make the numbers more manageable. Denmark said the insurance industry must become more involved. The World Bank said there was a need to change the perception that climate change adaptation was an environment issue, adding that it needs to be seen as a development issue. IDS said risk assessments would be meaningless unless done at a cross-sectoral level using a systems approach to using tools. FAO presented its work on assessing the long-term climate change impacts on crop commodities. He stressed the importance of bringing climate scenarios in line with the planning cycles of small-scale farmers.

GROUP III: GOVERNMENT: This group was co-facilitated by Mozaharul Alam, Bangladesh Centre for Advanced Studies, and Lawrence Flint, Environment and Development Action in the Third World (ENDA).

The co-facilitators opened the discussion by inviting participants to discuss successful examples of using tools for the integration of DRR and climate risk assessment into national policies and programmes, across different levels of government. They specified that "tools" could include approaches, strategies, and practices, as well as actual tools. The co-facilitators also asked participants to identify what should be integrated and the benefits of integration, together with the government levels at which specific integration should take place.

Germany said the metrics for success depend on what level is being considered, and provided an example that success at the municipal level may relate to actual risk reduction, while success at the national level may relate to legislation or a legal framework. He emphasized the need for flexibility in defining success.

Other participants also spoke about how to measure success, noting the need for indicators, which they said could include mortality rates and economic loss. Some participants emphasized that disaster preparedness and the impacts of disasters are often development or poverty issues. Others also stated that some of the main goals of disaster risk reduction should be to reduce vulnerability, increase resilience, prepare effectively for disasters and increase capacity to respond to disasters.

The Asian Disaster Preparedness Center highlighted the integration of DRR into development programmes, and gave examples of integrating DRR into road, rural housing and hospital construction, and the continued functioning of these infrastructures after disasters. On the role of governments, participants stressed the need for national governments to recognize and formalize the importance of local governments and communities. On the related issue of decentralization, some participants said local governments should be given the resources required for implementation, as whatever is decided at the national level would need to be implemented at the local level. Co-Facilitator Flint highlighted that even where there is sufficient disaster risk information, there is often the need for increased capacity to use the available information for policy and decision making.

On the issue of timeframes, participants noted the need to consider specific timeframes and goals. UNDP pointed out the need to build on past experience within the DRR community, stating that in some areas, climate change adaptation can be integrated into existing DRR frameworks, or *vice versa*. Paul Venton, independent consultant, explained the need to set short-term goals within specific timeframes, while recognizing that these short-terms goals must feed into an overall longer-term objective. Other tools discussed included effective early warning systems and regional centers. Brazil cautioned that regional centers cannot and should not replace national centers.

Participants also discussed some of the approaches to integration, including awareness raising, science-based action and a quantitative approach. They considered the need for better information for integration as well as the necessary instruments to transmit the information across different government levels. Venton suggested that a good approach to integration would involve multiple stakeholders in the risk assessment process. He also stressed the need to move from risk assessments to risk analyses.

Regarding the barriers to integration, Brazil said the political structures in a country, such as in the case of federal systems, could potentially be a barrier, for instance where a specific level of government is solely responsible for disaster risk reduction to the exclusion of other levels. Another participant noted that some governments do not make their vulnerability assessments public because of security or investment reasons, which may act as a constraint on integration and awareness raising.

SESSION FOUR: RECOMMENDATIONS AND NEXT STEPS

On Thursday morning, 12 March, participants reconvened in plenary to consider the recommendations and suggestions made in the previous day's breakout sessions, and to consider next steps for working together.

RECOMMENDATIONS FROM BREAKOUT GROUPS: Participants started by discussing each of the breakout groups and their recommendations.

Climate-related Hazards: Co-Facilitator Leon Charles presented the outcome of Group One. He said the group had discussed methodologies for listing hazards and relevant risk assessment and management tools, modalities for integration into national policies, and challenges in implementing integration modalities. He then listed the group's recommendations, which included:

- developing draft model legislation and implementation guidelines that can be adopted at national and local levels;

- facilitating access to resources for implementation;
- integrating climate change and DRR requirements into Environmental Impact Assessment guidelines and the policies of regional development banks;
- promoting multi-stakeholder collaboration, especially by ensuring availability of resources and incentives for participation;
- enhancing regional cooperation networks by providing support with mechanisms for generating and exchanging information via the internet and through clearinghouse mechanisms;
- engaging local NGOs and community-based organizations on specific climate change and DRR issues;
- using hazard impacts as a catalyst for change;
- introducing climate change and DRR into school curricula;
- promoting NWP initiatives, such as regional workshops to examine how information is generated and used in decision-making processes; and
- organizing NWP initiatives, such as a side event at COP 16.

Responding to a participant's question on whether the recommendation to link development funding to climate change and DRR would be a conditionality for financing, Co-Facilitator Charles said that it would be a logical part of the process. He noted that if it becomes a condition, it should be accompanied by necessary capacity building and financial assistance for implementation in developing countries. Another participant pointed out the importance of identifying the constraints of the disaster risk community in dealing with past hazards. He said the DRR community had been successful in reducing mortality rates and unsuccessful in incorporating DRR issues into development planning to avoid physical and economic losses. He noted the need to "make the leap from saving lives to saving livelihoods."

Sectoral Planning: Donald Lemmen, Canada, presented the report of the Group Two's deliberations. He explained that on the subject of initial challenges, the group had focused on definitional issues (integration into plans versus integrated plans); scope (links to actions at the local level); and approach (sectoral versus thematic/cross sectoral). On tools and approaches, he said the group noted that tools tend to be sector specific, but should be applied to a wide range of sectors, and stressed the need for inclusive participation at all levels.

On processes, he said the group had recommended: making use of existing processes; highlighting the use of national communications to engage with multiple ministries; and developing new strategies and action plans. On enablers and challenges, he said the group stressed the important role that champions can play in generating leadership, creating a sense of urgency, and exposing decision makers to potential impacts. On challenges, he said the group recommended addressing the lack of awareness and understanding, compartmentalization of approaches, lack of incentives, competing priorities, and work overload.

He further explained that the group had identified two key steps for sectoral integration. The first step focused on building awareness and creating champions, including facilitated dialogue, experience focused on historical and current vulnerabilities and risks, and sector specific information. It also recognized linkages with other key sectors. The second step focused on sectoral risk analysis, and included dialogue driven by sectoral expertise rather than climate experience, building on experience, stakeholder engagement,; basing information on a scientific understanding of thresholds, improving access to public and private sectors, and addressing the incremental costs of adaptation. Lemmen said the group further recommended that enabling requirements include communication, capacity building, and financing. In concluding, he said the group recommended assessing the commonalities among the breakout groups to derive broad recommendations for action.

Government: Anne Hammill, IISD, presented the recommendations from Group Three. She explained that the group's recommendations dealt with the tools to support integration, approaches to integration, strategies for integration, barriers to action, and factors enabling integration. She also identified the levels of government at which the tools, approaches and strategies could be used.

Regarding the tools for integration, she said the group had recommended: guidelines on the actual integration process; vulnerability and risk assessments and mapping; impact assessments; and networks as vehicles for communication. All of these tools would be applicable at all government levels. She also noted a recommendation for network mapping, which she said would be applicable at the regional level.

On approaches to integration, she said the group had recommended participatory, multi-stakeholder processes, and bottom-up and top-down approaches, which would be applicable at all levels. The group had also recommended an appreciation of the local and context-specific nature of risk and vulnerability reduction, and building up and using local or indigenous knowledge.

On strategies, the group had identified: building partnerships between DRR and climate change adaptation actors at all levels; establishing national and regional centers and forums at both national and regional levels; using and strengthening national institutions such as meteorological centers and the International Committee of the Red Cross (ICRC), at the national level; establishing dedicated funds; and incremental investment in resilience at all levels.

Hammill then reflected on the group's discussions on cross-cutting themes relating to strategies for integration. She noted that the group's discussions had covered communication strategies, appropriate tools and strategies, and capitalizing on opportunities presented in DRR and climate change adaptation actions.

On the enabling factors for integration, she said the group had recommended: effective knowledge sharing management, such as through regional centers; sufficient institutional capacity; adequate monitoring and evaluation mechanisms (for instance, by using indicators); regional/transboundary/South-South cooperation; horizontal and vertical integration of organizations working on disaster management and DRR; public awareness; availability of qualitative and quantitative data; building on existing initiatives and partnerships; ownership; identifying and building on best practices, particularly through identifying champions; long-term engagement and commitment to long-term action; and fast-tracking incremental investment in resilience.

In the ensuing discussion, participants emphasized the benefits of national and regional climate forums as avenues for interacting with a wide range of stakeholders, and also the need for guidelines.

In a general discussion on the recommendations of all the breakout groups, participants highlighted the strong role of regional centers in facilitating communication and the need for simple climate scenarios, with one participant stating that a key hurdle to engaging with relevant sectors and communities is a poor understanding of climate change risk. One participant noted the need to promote scientific research at the local level, explaining that it is difficult to convince governments on the need for action on DRR and climate change adaptation in the absence of local research or information. Another participant suggested holding a high-level segment under the UNFCCC at a future meeting, to present the outcomes of the NWP.

WORKING TOGETHER; CATALYZING ACTION BY NWP PARTNER ORGANIZATIONS: Chair Plume invited NWP partners to provide updates on their work and future plans.

The Network of Ibero-American Climate Change Offices (RIOCC) outlined its activities, including the launch of an adaptation programme for climate change impacts, vulnerability and adaptation. He summarized actions implemented by RIOCC, including: developing methods and tools for regional projects for mitigating and adapting to climate change in Latin America, and strengthening research and selecting and financing projects in forest management and climate change.

Brazil pointed out the development by his country of a regional model encompassing the Latin American and Caribbean region. He noted a Brazilian capacity-building workshop, which discussed results regarding the modeling of climate change and downscaling scenarios covering health, energy, agriculture, coastal zone management, and biodiversity. He underscored the importance of compiling extreme event data, and the importance of working together for downscaling and improving models, which would help in the elaboration of risk assessment in the region.

UNDP reported on its initiatives to integrate DRR and climate change. These included implementing a pilot project in four countries to develop risk identification, analysis and reduction capacity; promoting dialogue between the DRR and climate change communities; and looking at scientific information to identify capacity gaps in mainstreaming both issues in the decision-making process.

WMO noted its activities in DRR and climate. Its activities include modernizing communication infrastructure and identifying gaps and needs, developing standard guidelines for maintaining hazard databases at the national level, and promoting early warning systems with a multi-hazard approach with partners and stakeholders. Other WMO activities include facilitating partnerships between meteorological services with the disaster management community, and supporting the provision of information for decision-making processes.

The World Food Programme (WFP) noted its pledges to the NWP, including responding to climate-related emergencies and extreme weather events, standardized materials to provide on-site relief, and developing remote sensing and satellite images to enhance capacity to respond efficiently to extreme weather events. She also noted pledges to promote local and community-based projects, implement community-based activities to build flood defenses, and mitigate the impacts of floods and landslides, as well as to develop vulnerability food security analyses in many countries. Finally, she stressed the importance of incorporating hunger issues in the climate change agenda.

FAO noted new activities under the second phase, which included collaborating with the agricultural sector to prepare action plans in DRR with climate change adaptation at the national and district levels in Bangladesh, Nepal, Belize and Jamaica. They also included: documenting local-level food practices for DRR and climate change adaptation at the farmer level; preparing an e-learning tool based on the field work experience for community based adaptation (CBA); and developing a cooperation framework for climate change adaptation and DRR in the agricultural sector with the International Fund for Agricultural Development and WFP.

ENDA reported back on its pledge made at COP 14 in December 2008 and highlighted the creation of a demand and supply-driven knowledge management network in Africa. He noted activities related to translating information from French into English, and a community-based adaptation programme bringing science information and community experience together in one platform. In terms of new pledges, he suggested the development of regional NWP focal points.

UN/ISDR pledged new activities related to five of the NWP work areas, including the upcoming second Global Platform on DRR to be held in Geneva, Switzerland in June 2009. On socioeconomic information, he highlighted the Global Report on DRR. On methodologies and tools, he highlighted the first ever regional platform on DRR in the Americas, and on adaptation planning and practices he highlighted the development of the guidelines for including DRR in the National Adaptation Programme of Action in Peru.

The Bangladesh Centre for Advanced Studies identified pledges in relation to five of the NWP areas of work. On mainstreaming adaption into national policies and development programmes, he highlighted a project in Bangladesh, Nepal and Bhutan. On methodologies and tools, he outlined a project in eight African countries to build the capacity of civil society to engage in CBA, and on knowledge sharing he noted that the third CBA conference will be held in 2011. On sectoral approaches, he outlined a project to assess the vulnerability and adaptation needs of the agriculture sector in Bangladesh.

IDS presented the outcomes of the assessment on the use of tools. He said users commonly stress the value of studies and scientific projections, but some have noted the (greater) importance of bottom-up input to this process, including through field-level vulnerability assessments. On linking tools to user needs, he said there needs to be a greater examination of who will actually use the tools and for whom the resulting outputs are targeted. Tool developers, therefore, need to drill down to specific contexts, including scale, sector, output and cultural/institutional context.

A representative of the IPCC provided a brief overview of the upcoming scoping meeting for the proposed "Special Report on Extreme Events and Disasters: Managing the Risks," to be held

from 23-26 March 2009, in Oslo, Norway. He said the meeting would assess the feasibility, scope, structure and schedule of the report.

SESSION FIVE: CLOSING SESSION

The final session began with comments from a panel that included the facilitators of the breakout groups. Mozaharul Alam, Bangladesh Centre for Advanced Studies, noted that many of the issues discussed in the breakout groups relate to implementation, which he said is beyond the mandate of the NWP. He suggested that these issues should therefore be passed on to the SBI.

Lawrence Flint, ENDA, stressed the need for effective communication strategies, highlighting vehicles for transporting available knowledge in ways it can be clearly understood and at the level where it can be deployed. Leon Charles, Charles and Associates, Inc., said climate-related risks include non-disaster risks, and disaster risks include non-climate related risks. He therefore suggested a focus on sectoral risks, rather than attempting to focus on climate or disaster risks.

Madeleen Helmer, International Federation of Red Cross and Red Crescent Societies, emphasized that climate change is a global problem with local impacts and highlighted a particular interest in the local impacts. She also called for more national dialogues.

Glenn Dolcemascolo, UN/ISDR, outlined three key issues to focus on at the national level: the significance of multi-stakeholder dialogues, the importance of being guided by a clear framework, and the importance of monitoring and reporting on progress (for instance, through indicators).

In the ensuing discussion, one participant expressed hope that the workshop's recommendations would provide input to the future Copenhagen agreement and add momentum to the adaptation process. Responding to a participant's comment that the workshop did not focus on the most vulnerable people, Chair Helen Plume responded that this issue would be discussed throughout the year.

Chair Plume noted that the workshop had focused on specific empirical examples of integration and had involved in-depth discussions on the most important gaps for action. On adaptation and DRR, she identified priorities, such as integration into national development policies. She noted a number of interesting experiences from the national and regional levels, as well as synergies between DRR and adaptation. She also drew attention to discussions on the need for simple methods to be used by stakeholders, the availability of resources to build and sustain capacity, and the need for strong cooperation and coordination of knowledge and resources. Noting that there was not a "one-size-fits-all solution," she urged the replication of lessons learned by successful experiences, especially in terms of multi-stakeholder participation, accessible information for policymakers, knowledge sharing and regional cooperation. Chair Plume highlighted the importance of the NWP for the negotiations under the *Ad hoc* Working Group on Long-term Cooperative Action under the Convention. She emphasized the importance of this workshop in sharing knowledge and enhancing the adaptation regime. She thanked participants and organizers for the workshop, and especially the Government of Cuba for its hospitality.

Gisela Alonso, Cuba's Environmental Agency, thanked participants and wished for more resources for climate change adaptation to "make possible life for humanity in the planet."

Chair Plume closed the meeting at 3:41 pm.

UPCOMING MEETINGS

IPCC SCOPING MEETING FOR A SPECIAL REPORT ON "EXTREME EVENTS AND DISASTERS: MANAGING THE RISKS": This meeting, hosted by the Norwegian Pollution Control Authority, will take place from 23-26 March 2009, in Oslo, Norway. For more information, contact: IPCC Secretariat; tel: +41-22-730-8208; fax: +41-22-730-8025; e-mail: IPCC-Sec@wmo.int; internet: http://www.ipcc.ch/meetings/calendar.htm

FIFTH ADAPTATION FUND BOARD MEETING: This meeting will take place from 24-27 March 2009, in Bonn, Germany. The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing countries party to the Kyoto Protocol. For more information, contact: Adaptation Fund Secretariat; e-mail: secretariat@adaptation-fund.org; internet: http://www.adaptation-fund.org/

AWG-LCA 5 AND AWG-KP 7: The fifth meeting of the *Ad Hoc* Working Group on Long-Term Cooperative Action (AWG-LCA) and the seventh session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) will take place from 30 March to 8 April 2009, in Bonn, Germany. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: http://unfccc.int/meetings/intersessional/bonn_09/items/4753.php

THIRTIETH SESSION OF THE IPCC: This event will take place from 21-23 April 2009, in Antalya, Turkey. The 39th session of the IPCC Bureau will convene one day earlier, on 20 April 2009. For more information, contact: IPCC Secretariat; tel: +41-22-730-8208; fax: +41-22-730-8025; e-mail: IPCC-Sec@wmo.int; internet: http://www.ipcc.ch/meetings/session30.htm

NAIROBI WORK PROGRAMME: TECHNICAL WORKSHOP ON ECONOMIC DIVERSIFICATION: This workshop will take place from 28-30 April 2009, in Cairo, Egypt, and will address increasing economic resilience to climate change and reducing reliance on vulnerable economic sectors. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: http://unfccc.int

THIRTIETH SESSIONS OF THE UNFCCC SUBSIDIARY BODIES: The UNFCCC Subsidiary Bodies will meet from 1-12 June 2009, in Bonn, Germany. The SBI and the SBSTA are expected to meet, as will the AWG-LCA and the AWG-KP. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: http://unfccc.int/meetings/items/2654.php