19 April 2011

English/French/Spanish only

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

Subsidiary Body for Implementation
Thirty-fourth session
Bonn, 6–16 June 2011

Item X of the provisional agenda

Views and information on elements to be included in the work programme on loss and damage

Submissions from Parties and relevant organizations

1. The Conference of the Parties (COP), at its sixteenth session, invited Parties and relevant organizations to submit to the secretariat, by 21 February 2011, their views and information on what elements should be included in the work programme to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change, including the following:

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;

(b) Options for risk management and reduction, risk sharing and transfer mechanisms such as insurance, including options for micro-insurance, and resilience-building, including through economic diversification;

(c) Approaches for addressing rehabilitation measures associated with slow onset events;

(d) Engagement of stakeholders with relevant specialized expertise.[1]

2. The COP requested the secretariat to compile these submissions into a miscellaneous document to be made available by the thirty-fourth session of the Subsidiary Body for Implementation.

3. The secretariat has received 41 such submissions. In accordance with the procedure for miscellaneous documents, the 22 submissions from Parties, the nine submissions from United Nations organizations and the one submission from an intergovernmental

[1] Decision 1/CP.16, paragraph 28.

organization are attached and reproduced* in the languages in which they were received and without formal editing. In line with established practice, the nine submissions from non-governmental organizations have been posted on the UNFCCC website.[2]

* These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

[2] <http://unfccc.int/3689.php>.

Contents

* This submission is supported by Albania, Bosnia and Herzegovina, Croatia, Iceland, Montenegro, Serbia, the former Yugoslav Republic of Macedonia and Turkey.

** The International Labour Office is the permanent secretariat of the International Labour Organization.

Paper no. 1: Australia

Submission under the Cancun Agreements | February 2011

Work programme to consider approaches to address loss and damage associated with climate change impacts in vulnerable developing countries | SBI

I. Overview

This submission contains the views of the Australian Government on elements to be included in a work programme to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change, as requested under paragraph 28 of Decision -/CP.16 on *Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention* (AWG-LCA).

Australia welcomes the opportunity to submit its views under the Cancun Agreements on approaches to loss and damage. In overview, Australia considers that:

- the proposed work programme provides an important opportunity for capacity-building, and should focus principally on enhancing understanding of the "building blocks" necessary to ensure the effective functioning of loss and damage approaches in vulnerable developing countries, such as understanding and modelling risks associated with climate change impacts, identifying data collection needs and gaps in local implementation frameworks, and sharing and synthesising relevant expertise and good practice;

- it would be pre-emptive to begin developing any specific loss and damage approaches or mechanisms without equipping ourselves with a robust understanding of these issues;

- the work programme should seek to draw upon the existing work and technical expertise of established practitioners, programs and institutions working on loss and damage associated with climate change impacts in vulnerable developing countries.

II. Elements for a work programme to consider approaches to address loss and damage

Australia recognises that all countries will face challenges in addressing the risks associated with climate change. While in Australia's view, reducing carbon pollution – and developing a post-2012 international framework that supports meaningful mitigation action by all major emitters – remains the primary means of minimising climate-related risks and avoiding the emergence of dangerous climate change, we also recognise that there are some impacts that cannot be avoided. In particular, we recognise the distinction

between slow onset impacts and immediate impact events (such as extreme weather events causing immediate disruption and damage).

Australia considers that the Cancun Adaptation Framework provides a robust foundation for supporting and taking forward international co-operation on adaptation to unavoidable climate change impacts. In particular, Australia recognises that there are countries – particularly developing countries – that because of their high degree of exposure to the physical impacts of climate change, and limited institutional and financial capacity to respond, will be particularly vulnerable to these impacts. Australia has been a consistent advocate of prioritising international efforts towards these most vulnerable countries.

Accordingly, Australia welcomes the fact that the proposed work programme on approaches to addressing loss and damage associated with climate change impacts will focus on developing countries that are particularly vulnerable to the adverse effects of climate change. In Australia's view, this work programme provides an important opportunity for information-sharing and capacity-building, for discussing the information and data needs, risk modelling approaches, planning and regulatory settings, and programs and strategies that will assist vulnerable countries to identify, develop and implement effective approaches to addressing climate-related loss and damage. In particular, the work programme should focus on the following elements:

- as a critical first step, enhancing understanding of the risks and losses that vulnerable countries are facing and likely to face from climate change impacts;
- developing the "building blocks" necessary to ensure the effective functioning of adaptation policies, risk management and loss and damage approaches, including identifying (extensive) gaps in risk exposure data, risk modelling and regulatory and implementation frameworks, and discussing potential strategies to address these needs;
- sharing, synthesizing and promoting relevant knowledge, expertise and good practice in addressing climate change impacts through risk management, risk transfer and rehabilitation approaches;
- understanding the means available to assess what strategies or approaches are likely to be most practical and effective for the local needs and circumstances of vulnerable countries, for example through cost-benefit analysis and program evaluation.

In Australia's view, it would be pre-emptive to begin developing any specific loss and damage approaches or mechanisms without equipping ourselves with a robust understanding of each of these issues. Specifically, Australia remains cautious about the value of progressing discussions on possible development of a climate risk insurance facility, given the current paucity of detailed risk data for vulnerable countries that is essential to the effective functioning of risk transfer mechanisms, and the lack of clarity around whether a climate risk insurance facility would be the most effective means of addressing risks of climate-related loss and damage in vulnerable countries. As a mechanism to only transfer and not actually reduce risk, the role of insurance is likely to be limited in many vulnerable countries and regions: it cannot take the place of risk prevention.

It will be important to recognise and draw upon the initial work that has been done across the agenda proposed above. In Australia's view, the work programme on loss and damage can advance existing discussions through:

- facilitating enhanced coordination, co-operation and knowledge management through providing a forum to share and consolidate experiences and lessons learnt;
- engaging and drawing on the technical expertise of established practitioners, programs and institutions, such as the United Nations International Strategy for Disaster Reduction (UN ISDR) and World Bank's Global Facility for Disaster Reduction and Recovery;
- complementing and ensuring coherence with existing risk management and reduction frameworks such as the *Hyogo Framework for Action 2005 – 2015*;
- bringing to bear a specific focus on loss and damage risks associated specifically with climate change impacts, as distinct, for example, from broader disaster risks;
- ensuring that the work programme on loss and damage continues to complement the broader adaptation framework, bearing in mind that risk transfer and rehabilitation approaches should not undermine incentives for risk management and good adaptation planning, or distract from the core challenge of promoting a primary focus on climate compatible development;
- given the local nature of climate change impacts, recognising that the role best performed by the UNFCCC is to catalyse and facilitate support for the implementation of nationally, and where appropriate, regionally driven responses.

Paper no. 2: Bolivia (Plurinational State of)

Posición del Estado Plurinacional de Bolivia

CONTRIBUCIÓN PARA OPINIONES E INFORMACIÓN SOBRE QUÉ ELEMENTOS DEBEN INCLUIRSE EN EL PROGRAMA DE TRABAJO PARA ABORDAR PÉRDIDAS Y DAÑOS ASOCIADOS CON LOS IMPACTOS DEL CAMBIO CLIMÁTICO

El Estado Plurinacional de Bolivia presenta sus puntos de vista sobre "los elementos que deben incluirse en el programa de trabajo para abordar pérdidas y daños asociados con los impactos del cambio climático". Las opiniones expresadas en esta y otras comunicaciones escritas y verbales por parte de Bolivia no deben ser consideradas como aceptación de ciertos resultados de la Convención Marco sobre el Cambio Climático de la ONU en Cancún, que se declararon aprobados pese a la objeción formal, explícita y expresa de Bolivia sobre la base, entre otras cosas, que allanará el camino para: el fin del Protocolo de Kioto y su reemplazo con promesas voluntarias más laxos y donde ni siquiera especifican las promesas voluntarias de los países desarrollados y por lo tanto menos especifican sus compromisos de reducción de emisiones; el anclaje de reducciones de emisión inadecuadas de los países Anexo I bajo la Convención, los cuales según se estima en base a las promesas hechas en base al entendimiento de Copenhague resultarían en reducciones de emisión por países desarrollados de 13-17% de los niveles en referencia a los niveles de 1990; llevarían a niveles del calentamiento global de hasta 4 grados centígrados, lo cual es inaceptable para la humanidad y la naturaleza[1].

Bolivia considera que esta violación del consenso como un precedente peligroso para el sistema multilateral y el estado del derecho, y defenderá los derechos de Bolivia y para garantizar la aplicación de las normas y procedimientos de forma justa y equitativa a todos los Estados, grandes y pequeños.

A. POSIBLE DESARROLLO DE FACILIDADES PARA SEGUROS DE RIESGO CLIMÁTICO PARA HACER FRENTE A LOS IMPACTOS ASOCIADOS A FENÓMENOS METEOROLÓGICOS SEVEROS;

1. Consulta pública y reunión de expertos para identificación de diversas facilidades y mecanismos para abordar pérdidas y daños, incluido análisis de: (i) Establecimiento de un fondo con recursos de los países Anexo 1 de acceso directo a los países No Anexo 1 a fin que los gobiernos de países

1 El reciente informe del PNUMA, 'Emissions Gap Report' (Noviembre 2010), afirma que las promesas de países desarrollados en virtud del Entendimiento de Copenhague se estima que resultarían de las emisiones de entre +6 y -16% sobre los niveles de 1990 en 2020. asimismo, se considera que las promesas del entendimiento de Copenhague implica un aumento de temperatura de entre 2,5 y 5°C antes del fin de siglo

en vías de desarrollo desarrollen interiormente sistemas de protección a riesgos climáticos (ii) Limitación de seguros internacionales.

Resultados esperados

- Documento técnico detallado sobre las limitaciones de los seguros internacionales.

2. Talleres regionales sobre mecanismos de fortalecimiento de sistema de bases de datos, información y conocimiento de riesgos climáticos, impactos, vulnerabilidad y capacidades de adaptación como fuente de toma de decisiones para desarrollo de facilidades y mecanismos para abordar pérdidas y daños.

Resultados esperados

- Propuesta de sistemas regionales robustos de observación sistemática del clima con la priorización de acciones para el funcionamiento de estaciones clave para redes regionales meteorológicas, hidrométricas e hidrogeológicas.

- Propuesta de contenidos mínimos para base de datos regionales donde se compile y sistematice información acerca de los impactos, daños y pérdidas por eventos hidrometereológicos extremos y graduales del cambio climático, incluido los impactos en las poblaciones migrantes por cambio climático.

3. Talleres regionales sobre los costos de pérdidas y daños por impactos extremos y graduales del cambio climático, como también los costos adicionales y totales de adaptación en la que incurren los países en vías de desarrollo.

- Analisis y optimización de metodologías existentes de evaluación de daños y pérdidas.

- Desarrollo de metodologías de cálculos económicos para la rehabilitación, reconstrucción de daños y pérdidas como también la compensación por oportunidades de desarrollo pérdidas.

- Documento de diagnóstico (sujeto a actualizaciones) en los que se compile y sistematice información diferenciada sobre el financiamiento que los países desarrollados proveen a los gobiernos de países en desarrollo para la respuesta a desastres por eventos hidrometereológicos extremos.

4. Cursos de entrenamiento asistencia o virtual sobre desarrollo de escenarios de cambio climático y modelación aplicada según las condiciones locales y regionales. Así también, cursos de entrenamiento en

la aplicación de percepción remota en la prevención, gestión y reducción de riesgos climáticos.

Resultados esperados

- Libre acceso y difusión de los resultados de los diferentes estudios de escenarios de cambio climático y modelamiento.

- Capacitación de técnicos y científicos de países en vías en desarrollo.

B. OPCIONES PARA LA GESTIÓN Y REDUCCIÓN DE RIESGOS; MECANISMOS DE INTERCAMBIO Y TRANSFERENCIA DE RIESGO COMO SEGUROS, INCLUYENDO LAS OPCIONES PARA MICRO-SEGUROS, Y LA CONSTRUCCIÓN DE LA RESILIENCIA, INCLUIDA MEDIANTE LA DIVERSIFICACIÓN ECONÓMICA;

1. Talleres regionales sobre la integración de adaptación al cambio climático (incluida la gestión de riesgos climáticos) en la planificación del desarrollo.

   Resultados esperados

   - Guías para la introducción de adaptación al cambio climático en la planificación, gestión e inversión del desarrollo garantizando que deben estar bien diferenciadas a fin de cuantificar los costos adicionales y totales para la adaptación al CC a ser cubiertos por los países desarrollados con fondos nuevos y no ser incorporadas en las Ayudas Oficiales al Desarrollo ODAs.

2. Reunión de expertos y desarrollo de investigaciones para el análisis de criterios de adaptación al cambio climático (incluida la gestión de riesgos climáticos) en la inversión pública.

   Resultados esperados

   - Documento técnico para el desarrollo de normas y códigos de construcción de infraestructura pública y asentamientos humanos considerando adaptación al cambio climático (incluida la gestión de riesgos climáticos).

   - Propuesta para plan de incentivos e intercambio académico entre los sistemas de universidades públicas para la investigación de resiliencia climática en la inversión pública, entre otros en el sector agropecuario y diversificación económica.

   - Estudios para optimizar los análisis convencionales de costo-beneficios y desarrollar índices/criterios y parámetros que establezcan factibilidad y efectividad al garantizar la protección a los pueblos frente al cambio climático.

3. Consulta pública y reunión de expertos sobre el desarrollo de criterios, análisis económicos y sistematización de lecciones aprendidas vinculadas a desplazamiento, migración y relocalización planificada inducidas por el cambio climático.

Resultados esperados

- Compendio de recomendaciones para la formulación de políticas para la protección actual y futura de los habitantes más vulnerables ante el cambio climático.

4. Convocatorias a sistemas de universidades públicas y centros regionales para el desarrollo de investigaciones conjuntas con pueblos originarios, campesinos e indígenas sobre medidas de prevención y respuestas locales a gestión de riesgos.

Resultados esperados

- Compendio de diálogos Interculturales para compartir saberes, conocimientos, técnicas y tecnologías de adaptación al cambio climático (incluida la gestión de riesgos climáticos).

C. ENFOQUES PARA ABORDAR LAS MEDIDAS DE REHABILITACIÓN RELACIONADAS CON EVENTOS LENTOS;

1. Reunión de expertos sobre impactos graduales del cambio climático y medidas de adaptación en ecosistemas montañosos (incluidos retracción de glaciares), zonas áridas y semiáridas y en zonas expuestas al deterioro forestal.

Resultados esperados

- Priorización y/o fortalecimiento de operación de estaciones para el monitoreo y observación de impactos en los glaciares. Con el planteamiento de medidas de adaptación.

- Diagnóstico de retro-efecto socioeconómico del cambio climático por flujos migratorios y expansión de la frontera agrícola. Con el planteamiento de políticas de adaptación incluidas diversificación económica.

2. Convocatorias concursables a sistemas de universidades públicas y centros regionales de investigación para el desarrollo de investigaciones conjuntas con pueblos originarios, campesinos e indígenas sobre medidas de adaptación a la exacerbación de salinización, alteración del régimen de lluvias, degradación de suelos, pérdida en biodiversidad, desertificación y

afectaciones en la obras civiles e infraestructura públicas inducidas por cambio climático.

Resultados esperados

- Compendio de técnicas y lecciones aprendidas de la adaptación al cambio climático en el manejo sustentable de los recursos naturales.

3. Consultas públicas y reunión de expertos para planteamiento de acciones de adaptación regionales, nacionales y subnacionales frente a impactos de cambio climático en la disponibilidad de recursos hídricos y provisión de alimentos.

Resultados esperados

- Compendio de técnicas, innovaciones y lecciones aprendidas de la adaptación al cambio climático en regiones urbanas y rurales frente al stress hídrico e inseguridad alimentaria.

4. Talleres regionales para planteamiento de acciones de adaptación regionales, nacionales y subnacionales frente a impactos graduales del cambio climático en la salud humana.

Resultados esperados

- Guías de fortalecimiento de los sistema de vigilancia epidemiólogicas y control de enfermedad sensibles al clima
- Guías de construcción y/o fortalecimiento de capacidades de los sistemas sanitarios ante escenarios de cambio climático.
- Compendio de técnicas, innovaciones y lecciones aprendidas de la adaptación al cambio climático en el sector sanitario.

D. COMPROMISO DE LAS PARTES INTERESADAS CON INSTANCIAS ESPECIALIZADAS RELEVANTES;

1. Las diferentes instituciones, organizaciones y arreglos institucionales deben proveer de información, publicaciones y literatura técnica específica sobre adaptación al cambio climático (incluida la gestión de riesgos climáticos) al programa de trabajo de Nairobi. Consecuentemente el NWP compila, sistematiza y actualiza el sistema de información para proporcionar a los países partes, durante las reuniones de los grupos subsidiarios.
2. La Conferencia de las Partes identificará de acuerdo a criterios y necesidades de los países parte, el establecimiento y/o continuidad,

además de la composición y modalidades de los Programas de Acción y/o grupos de trabajo especiales para adaptación.

3. Los Programas de Acción y/o los grupos de trabajo especiales trabajaran bajo la coordinación Programa de Trabajo de Nairobi, aportando con insumos, documentos técnicos y realización de talleres temáticos específicos las propuestas para la intensificación de las acciones de Adaptación. Siendo el NWP la instancia responsable de la compilación y formulación de documentos de trabajo sujetas a análisis y aprobación por parte del comité.

4. El NWP será la instancia catalizadora y único mecanismo de interrelación con otros instituciones y arreglos institucionales sobre las lecciones aprendidas, insumos y recomendaciones técnicos específica y diferenciada según la temática vinculada para cambio climático.

Paper no. 3: Bosnia and Herzegovina

With reference to Draft decision CP.16 we would like to support and participate in the programme, especially in the development of climate risk insurance facility that was suggested in the Article 28.

Taking into account the basic principles of the UN Framework Convention on Climate Change and bearing in mind the strategic interests of Bosnia and Herzegovina to represent its rights to participate in the implementation of programs through the flexible mechanisms of Kjoto Protocol, we are ready to act together with other countries from the South – East European region, driven by the European Union policies towards the cleaner and „climate frendly“ future.

In the last year, there were massive floods throughout Bosnia and Herzegovina, which have caused consequences on human health, private properties, agriculture, etc. As a country with economy in transition, Bosnia and Herzegovina cannot fight the climate changes on its own and with no support from international community.

We think it is very important to include development of a climate risk insurance facility into future programme as Bosnia and Herzegovina needs assistance in this particular area.

Paper no. 4: Canada

SUBMISSION BY THE
GOVERNMENT OF CANADA

ELEMENTS FOR A WORK PROGRAMME TO CONSIDER APPROACHES TO ADDRESS LOSS AND DAMAGE ASSOCIATED WITH CLIMATE CHANGE IMPACTS, INCLUDING IMPACTS RELATED TO EXTREME WEATHER EVENTS AND SLOW ONSET EVENTS

FEBRUARY 2011

Canada supports the outcomes of the 2010 Cancun Climate Conference. The Cancun Agreement reflects the resolve by all Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to work together to address the global threat of climate change.

Canada believes that the Cancun Agreement strikes an appropriate balance among the interests of Parties through the adoption of a comprehensive package of decisions on a wide range of issues, and represents a significant step in the international effort to reach a fair, effective and comprehensive post-2012 climate change regime.

On mitigation, the Agreement establishes a framework to set out nationally-determined mitigation pledges for all countries, with emission reduction targets and/or nationally appropriate mitigation actions put forward in 2010 by both developed and developing countries and recognized in Cancun.

Canada recognizes the importance of reforms that will increase the transparency and accountability of all countries in meeting their mitigation pledges. In particular, the international community will have access to regular, reliable and comprehensive information on global greenhouse gas emissions and mitigation activities underway. The international consultation and analysis will facilitate Parties' efforts by providing a forum for sharing views and best practices.

On the finance and adaptation side, the Green Climate Fund has the potential to become a key channel for delivering multilateral assistance to developing countries for climate-related support, while the Cancun Adaptation Framework will address the adaptation challenges faced by all Parties, and ensure that support is prioritised for the most vulnerable countries.

Canada is an advocate of clean technology and the Technology Mechanism established in Cancun can lead to a more sustainable low-carbon future by supporting innovation and development of new technologies, while facilitating engaged involvement from the private sector. Canada supports the REDD+ Mechanism (Reducing Emissions from Deforestation and Degradation), which has the potential to address as much as 15% or more of global greenhouse gas emissions by targeting emissions from deforestation and forest degradation.

To implement these and other key decisions, the Cancun Agreement sets out a roadmap for further work. Canada will engage in these continuing discussions as we turn our attention to elaborating the technical details and prepare for the next Climate Conference in Durban in 2011. As part of this effort, Canada is submitting its views on the work programme to consider approaches to address loss and damage.

Objective, Scope, Outcomes and Modalities

The Cancun Agreement recognizes the need to strengthen international cooperation and expertise to further understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events, and those related to slow-onset impacts. To ensure development of an effective work programme, it is important that Parties agree at the outset on the objective, scope, outcomes and modalities.

Objective

As identified in the Cancun Agreement, the objective of the work programme is to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change.

Scope

In Canada's view, there are two important aspects to addressing loss and damage from the adverse effects of climate change that should be included in the work programme:

1. reducing the risk of loss and damage through proactive adaptation planning and measures; and
2. increasing the resilience of institutions, systems and communities to recover from unavoidable impacts caused by climate change, including through insurance and other risk sharing and risk transfer mechanisms.

While recognizing the need for action on both aspects, the work programme should prioritize activities that contribute to strengthening capacities needed to address climate change-related risk in an anticipatory manner. It will also be important to ensure that this programme focuses exclusively on the adverse impacts of climate change, and not encompass consideration of response measures, which will be addressed through a separate process as agreed in the Cancun Agreement.

Outcomes

As agreed in Cancun, a key outcome of the work programme will be a set of recommendations for consideration by the COP at its eighteenth session. Canada sees the potential for several other important outcomes, including increased international cooperation, enhanced expertise, and increased understanding by Parties of the strengths and limitations of various approaches to reduce loss and damage.

In achieving its outcomes, the work programme should build on the work of relevant experts and organizations as well as lessons-learned from existing mechanisms. These lessons include: what aspects of existing mechanisms need to be strengthened, what factors contribute to the success (or failure), and what gaps in action remain. Canada notes the relevant work done previously under the UNFCCC on related issues (including FCCC/TP/2008/9: "Mechanisms to manage financial risks from direct impacts of climate change in developing countries"), as well as the work done by partners to the Nairobi Work Programme in response to the Call for Action related to understanding of impacts of, and vulnerability to, extreme events.

Further, while the work programme will consider approaches to addressing loss and damage associated with impacts specific to climate change, it is important that the outcomes be informed by lessons learned from ongoing efforts to address climate risks broadly. The work of the United

Nations International Strategy for Disaster Reduction, and the Hyogo Framework for Action, are particularly important.

Finally, to ensure well-founded recommendations, it is Canada's view that the discussions should include consideration of:

- costs, benefits and risks associated with each risk management, reduction and sharing mechanism, with particular regard to benefits for the most vulnerable countries and communities;
- effectiveness of various mechanisms for incentivizing adaptation/avoiding maladaptation;
- advantages and disadvantages of micro, national, regional and international scales of implementation;
- the roles of governments, the private sector and civil society organizations, including innovative partnership approaches to advancing adaptation;
- short, medium and long-term steps required to establish mechanisms, including those that have co-benefits for other aspects of adaptation (i.e., climate data, strengthening observation networks etc);
- effective and proven approaches to encourage the engagement of the private sector in risk reduction or risk management;
- institutional and human resource capacities to implement recommended activities;
- effective and proven tools for sharing risk at pilot or regional scales; and
- how these mechanisms fit within the context of the full spectrum of actions required for adaptation and risk reduction for events unrelated to climate change.

Modalities

In implementing the work programme, it will be critical to engage a broad range of relevant experts, including those from the private sector and civil society organizations, through workshops, expert meetings, and technical papers, as appropriate. In this context, Canada encourages collaboration between the secretariats of the UNFCCC and United Nations International Strategy for Disaster Reduction to ensure the integration of relevant experts in all relevant workshops and expert meetings.

Finally, in Canada's view, the work programme should be structured in a manner that enables thorough discussion to ensure that recommendations are appropriately placed in the context of the broader suite of actions required for adaptation.

Canada welcomes the opportunity to discuss this important issue further, and looks forward to engaging actively and constructively with our partners to ensure the success of the work programme.

[Translation as submitted]

Soumission par le gouvernement du Canada

Éléments d'un programme de travail pour étudier des démarches permettant de remédier aux pertes et préjudices liés aux incidences des changements climatiques, notamment les incidences des phénomènes météorologiques extrêmes et des phénomènes qui se manifestent lentement.

Février 2011

Le Canada soutient les résultats de la Conférence sur les changements climatiques qui a eu lieu à Cancún en 2010. L'Accord de Cancún reflète clairement la détermination de toutes les parties à la Convention-cadre des Nations Unies sur les changements climatiques (CCNUCC) à collaborer en vue de lutter contre la menace mondiale des changements climatiques.

Le Canada croit que l'Accord de Cancún atteint un équilibre adéquat entre les intérêts des parties grâce à l'adoption d'une série de décisions dans certains domaines clés et qu'il représente une étape importante dans les efforts internationaux visant à atteindre un régime équitable, efficace et exhaustif relativement aux changements climatiques au-delà de 2012.

En ce qui concerne les mesures d'atténuation, l'Accord établit un cadre permettant de saisir les engagements nationaux de toutes les parties en faveur de mesures d'atténuation, tenant compte des cibles de réduction des émissions et des mesures d'atténuation appropriées au niveau national (NAMA) soumises en 2010 tant par les pays développés que par les pays en développement et reconnues à Cancún.

Le Canada reconnaît également l'importance des réformes en vue d'augmenter la transparence et la responsabilité de tous les pays dans le respect de leurs engagements d'atténuation. En particulier, la communauté internationale aura accès à des renseignements réguliers, fiables et complets sur les émissions mondiales de gaz à effet de serre ainsi que sur les activités d'atténuation qui sont en cours. Le processus international de consultation et d'analyse facilitera également les efforts des parties en mettant à leur disposition un forum où elles pourront partager leurs points de vue et leurs pratiques exemplaires.

Du côté des finances et de l'adaptation, le Fonds vert pour le climat pourrait devenir un véhicule clé pour la mise en œuvre d'une aide multilatérale pour le soutien lié au climat à l'intention des pays en développement alors que le Cadre de l'adaptation de Cancún contribuera de façon importante à la résolution des défis auxquels sont confrontés les pays les plus pauvres et les plus vulnérables.

Le Canada est un défenseur de la technologie propre et le mécanisme technologique convenu à Cancún devrait nous conduire vers un avenir faible en carbone et plus viable en soutenant l'innovation et l'élaboration de nouvelles technologies, tout en facilitant la participation du secteur privé. Le Canada soutient également le mécanisme REDD +, (réduction des émissions résultant du déboisement et de la dégradation des forêts), qui a le potentiel de confiner jusqu'à 15 % ou plus

d'émissions mondiales de gaz à effet de serre en ciblant les émissions issues de la déforestation et de la dégradation des forêts.

Pour mettre en œuvre ces mesures ainsi que d'autres décisions clés, l'Accord de Cancún présente une feuille de route efficace pour la poursuite des travaux. Le Canada participera aux discussions à venir tout en portant son attention à l'élaboration des détails techniques en préparation de la prochaine Conférence sur le climat à Durban en 2011. À cet effet, le Canada présente ses observations sur le programme de travail pour étudier des démarches permettant de remédier aux pertes et préjudices liés aux incidences des changements climatiques.

Objectif, portée, résultats et modalités

L'Accord de Cancún reconnaît la nécessité de renforcer la coopération et les compétences spécialisées à l'échelle internationale afin de mieux comprendre et de réduire les pertes et préjudices liés aux incidences des changements climatiques, notamment les incidences des phénomènes météorologiques extrêmes et des phénomènes qui se manifestent lentement. Pour assurer l'élaboration d'un programme de travail efficace, il est important que les parties s'entendent dès le départ sur l'objectif, la portée, les résultats et les modalités.

Objectif

L'objectif du programme de travail, tel qu'il est défini dans l'Accord de Cancún, est d'étudier des démarches permettant de remédier aux pertes et préjudices liés aux incidences des changements climatiques dans les pays en développement qui sont particulièrement exposés aux effets néfastes de ces changements.

Portée

Du point de vue du Canada, il y a deux aspects essentiels qui devraient être inclus dans le programme de travail pour remédier aux pertes et préjudices liés aux incidences des changements climatiques :

1. Réduire le risque de pertes et préjudices grâce à une planification et à des mesures proactives d'adaptation, et

2. Améliorer la résilience des institutions, des systèmes et des collectivités pour se remettre des effets inévitables causés par les changements climatiques, notamment par le biais d'assurances et d'autres mécanismes de mutualisation et de transfert des risques.

Tout en reconnaissant la nécessité de mesures concernant ces deux aspects, le Canada pense que le programme de travail devrait donner la priorité aux activités qui contribuent à renforcer les capacités individuelles et institutionnelles nécessaires pour lutter contre les risques associés aux changements climatiques par anticipation. De plus, il sera important de s'assurer que ce programme porte exclusivement sur l'atteinte de résultats remédiant réellement aux pertes et préjudices causés par les effets néfastes des changements climatiques, et qu'il ne tienne pas compte des mesures de

riposte, qui seront traitées dans le cadre d'un processus distinct, tel que convenu dans l'Accord de Cancún.

Résultats

Tel que convenu dans l'Accord de Cancún, un résultat clé du programme de travail sera un ensemble de recommandations soumises aux fins d'examen par la Conférence des Parties au cours de sa dix-huitième session. Le Canada considère plusieurs autres résultats importants possibles, dont une coopération internationale accrue, une plus grande expertise et une meilleure compréhension des parties concernant les forces et les limites des différentes démarches visant à remédier aux pertes et préjudices.

Pour atteindre ces résultats, le programme de travail devrait s'appuyer sur le travail d'experts et d'organismes pertinents ainsi que sur les leçons tirées des mécanismes existants. Ces leçons concernent notamment les aspects des mécanismes existants à renforcer, la définition des facteurs contribuant à la réussite (ou à l'échec) de mécanismes précis et les lacunes persistantes relatives aux mesures. Le Canada prend acte des travaux effectués précédemment sur des questions connexes dans le cadre de la Convention-cadre des Nations Unies sur les changements climatiques notamment les documents FCCC/TP/2008/9 : « Mécanismes de gestion des risques financiers liés aux répercussions directes des changements climatiques dans les pays en développement »; FCCC/TP/2008/3 : « Tendances physiques et socioéconomiques des risques climatiques et des événements extrêmes, et répercussions de ces derniers sur le développement durable », ainsi que les travaux effectués par les partenaires du Programme de travail de Nairobi en réponse à l' « Appel à l'action pour la promotion de la compréhension de la vulnérabilité aux changements climatiques, à la variabilité actuelle et future du climat et aux événements extrêmes, et de leurs répercussions ».

En outre, alors que le programme de travail devra tenir compte des approches pour gérer les pertes et préjudices liés aux incidences des changements climatiques, le Canada pense qu'il est important que les résultats tiennent compte des leçons tirées des efforts en cours visant à traiter les risques climatiques de façon générale. Les travaux effectués dans le cadre de la Stratégie internationale des Nations Unies pour la prévention des catastrophes et du Cadre d'action de Hyogo sont particulièrement importants.

Enfin, afin d'obtenir des recommandations fondées, le Canada pense que les discussions devraient inclure la prise en compte des éléments suivants :

- les coûts, les avantages et les risques associés à chaque mécanisme de gestion, de réduction et de partage des risques, en particulier en ce qui concerne les avantages pour les pays et les communautés les plus vulnérables;
- l'efficacité des divers mécanismes visant à favoriser l'adaptation et à éviter la maladaptation;
- les avantages et désavantages des échelles de mise en œuvre aux niveaux, micro, régional, national et international;
- les rôles des gouvernements, du secteur privé et des organisations de la société civile, y compris les démarches novatrices axées sur des partenariats qui visent à promouvoir l'adaptation;

- les étapes à court, à moyen et à long terme nécessaires pour mettre en place les mécanismes, y compris ceux qui ont des avantages connexes pour d'autres aspects de l'adaptation (p. ex., données climatiques, renforcement des réseaux d'observation, etc.);
- les approches efficaces et éprouvées visant à encourager l'engagement direct du secteur privé dans la réduction ou la gestion des risques;
- les capacités des institutions et des ressources humaines à mettre en œuvre les activités recommandées;
- les outils efficaces et éprouvés de partage des risques à l'échelle pilote ou régionale;
- comment ces mécanismes s'ajustent au contexte de l'éventail complet des mesures requises en vue de l'adaptation et de la réduction des risques liés aux événements sans rapport avec les changements climatiques.

Modalités

Pour la mise en œuvre du programme de travail, il sera essentiel de mobiliser un large éventail d'experts pertinents, notamment ceux du secteur privé et des organisations de la société civile, par l'entremise d'ateliers, de réunions d'experts et de documents techniques, si cela s'avère approprié. Dans ce contexte, le Canada encourage la collaboration entre les secrétariats de la Convention-cadre des Nations Unies sur les changements climatiques et de la Stratégie internationale des Nations Unies pour la prévention des catastrophes afin de garantir l'intégration d'experts du domaine dans toutes les réunions d'experts et tous les ateliers pertinents.

Enfin, le Canada pense que le programme de travail doit être structuré afin de permettre une discussion approfondie et d'intégrer des recommandations appropriées dans le contexte d'une plus vaste série de mesures nécessaires pour l'adaptation.

Le Canada sera heureux de discuter de ce sujet de façon plus approfondie et voudra participer activement et de façon constructive de concert avec nos partenaires pour assurer le succès du programme de travail.

Paper no. 5: China

China's submission of information and views

25/02/2011

China's Submission on the Elements that Should be Included in the Work Programme to Consider Approaches to Address Loss and Damage

China welcomes the opportunity to submit views and information on what elements should be included in the work programme of SBI to consider approaches to address loss and damage. In response to paragraph 28 of Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention adopted by COP of UNFCCC at its 16th Session, China would like to submit the following views.

1. China supports the elements as specified under paragraph 28 of Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention to be included in the work programme;
(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;

(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification;

(c) Approaches for addressing rehabilitation measures associated with slow onset events;

(d) Engagement of stakeholders with relevant specialized expertise;

2. In addition, China proposes the following two elements to be also included in the work programme of SBI:

(a) Development of guidance and methodologies on loss and damage assessment associated with climate hazards and climate change impacts in developing countries;

(b) Modalities and procedures to address loss and damages associated with climate change impacts in developing countries.

Paper no. 6: Ethiopia

Elements to be included in the Work Programme of the Cancun Adaptation Framework

1. Introduction

What is being proposed hereunder is based on land-locked Ethiopia's Draft Programme of Adaptation to Climate Change with some ideas on coastal areas added. It is aimed at fulfilling Paragraph 28 of Decision 1/CP.16 of the Conference of the Parties to the UNFCCC taken in Cancun, Mexico, in December 2010, which invites Parties to submit by 21 February 2011, their views on what elements should be included in the work programme on adaptation.

Ethiopia's interest is in the substance of the ideas written hereunder and, if it so wishes, the UNFCCC secretariat can express them in different words and in any format it finds appropriate.

2. The manifestations of climate change and the adaptive actions that they require

2.1 The manifestations of climate change and the risks that they pose usually vary from country to country, and may even vary within a given country. By combining the observed trends within a country with the predictions of weather events that are implied by the climate change predictions of the Intergovernmental Panel on Climate Change (IPCC), and by rendering the combined information more specific through country-wide or even sub-country level modelling, each country Party should specify the risks posed to its various parts and to the various situations within its territory. The outcome should be shown in maps and distributed in the country Party to all decision makers and to the public.

2.2 Each country Party should develop a system of detailed weather forcasting and information dissemination so that the authorities and the public in the areas that are likely to be hit by extreme whether events are warned as far ahead of time as possible.

2.3 Awareness on climate change must be mainstreamed into development and service planning and implementation of all levels of governance so as to provide the requisite institutional capacity at all administrative levels.

2.4 The educational curricula at all levels should integrate adaptation to climate change into all relevant disciplines.

2.5 Research and development (R&D) for an effective programme of adaptation to climate change should be enhanced. Some of the sectors that will require focus in R&D, depending on the environmental specificities of the country Party, include:

- Plant and animal breeding for continuing good agricultural performance both in the changed climate and under the impacts of likely extreme weather events e.g. mean temperature rise and fluctuations thereof, marshland and soil salnization, droughts, floods;
- Crop protection;
- Monitoring crop pollinators so as to solve pollination problems that may arise;
- Preventing land degradation and soil fertility loss from extreme weather event;
- Preventing the spread of human, animal and crop diseases, disease vectors and pests;
- Strengthening human and animal health care so as to act quickly and effectively when diseases are reported;

2.6 Both the *in situ* and *ex situ* conservation of crop genetic resources should be strengthened;

2.7 Protected areas in various environmental settings interconnected by corridors should be effectively managed and monitored to save biodiversity;

2.8 Organic wastes should be kept separate to avoid pollution and should be taken back from urban to rural areas for maintaining soil fertility;

2.9 Standards for infrastructure should be developed and enforced to withstand extreme weather events;

2.10 Enough food and feed should be stored for surviving the impacts of droughts and floods;

2.11 Settlements in areas prone to flooding or landslides should be relocated to safer settings;

2.12 The major cities by the sea should have dykes built to protect them from inundation;

2.13 All local communities should be helped to create their own respective local organizational structures that will enable them to act quickly and effectively in times of extreme weather events;

2.14 Whenever and wherever possible, renewable energy potential should be harnessed and the use of fossil fuels minimized;

2.15 Insurance schemes should be developed to write off damage from extreme weather events especially at the local community level;

2.16 Gender equality and care for the physically and mentally handicapped should be mainstreamed into all these activities.

3. Organizational structure

3.1 At the central government level, sectoral ministries and other sectoral agencies should be made specifically responsible for each of these specified activities. They should interact all the way down to the district level to ensure that their respective responsibilities are implemented at both rural and urban local community levels. Each administrative level, starting from the local community, should provide to the next higher level, annual reports of their accomplishments and problems of implementation.

3.2 At the level of each district, all these activities should be integrated so that the state agents interact with each local community in each city, town or village as the case may be, as a coordinated body speaking with one voice to convince the members of each local community of the need for and efficacy of the adaptation measures that it should take.

3.3 This information flow should be made through completely participatory discussion and persuation and never through coercion.

3.4 This is because top-down decision taking is too slow in implementation in times of crises. Equally importantly, bottom-up decision taking is more likely to be well informed about local weaknesses, strengths and possibilities and is thus more likely to be quick and effective enough in times of hazard.

Paper no. 7: Grenada on behalf of the Alliance of Small Island States

Submission by Grenada on behalf of the

Alliance of Small Island States (AOSIS)

Views on the work programme to consider approaches to address loss and damage

February 2011

Grenada welcomes the opportunity to present the views of the 43 member States of the Alliance of Small Island States (AOSIS), in response to the invitation to Parties to submit to the Secretariat, their views on the work programme to consider approaches to address on Loss and Damage.

Background

The average vulnerability of SIDS has worsened over the last decade, primarily because of higher exposure to external shocks including increasing adverse impacts of climate change. In the two global international meetings on sustainable development of SIDS, under United Nations sponsorship, climate change was considered the principal threat to survival of the SIDS. This is articulated in the 1994 Barbados Programme of Action (BPoA), which provides a blueprint for sustainable development in SIDS, and the follow-up to the BPoA, the 2005 Mauritius Implementation Strategy (MIS).

Due to their small size and internal markets, SIDS rely heavily on international trade, have a heavy dependence on preferential trade agreements, suffer from a steady depletion of limited natural resources endowment (minerals, forest, freshwater, fish stocks); reduced possibilities in diversifying the economy; reduction in donor assistance; growing dependence on tourism, and growing indebtedness. In fact, very high debt has placed more than 10 SIDS amongst the most indebted countries in the world.

SIDS are highly dependent on environmental services, and in the case of the Pacific Islands region, fishery resources are critically important as a source of food and employment, a generator of government revenue and a foundation for economic development. Foreign-based offshore fishing is a major revenue earner, as the license fees paid to Pacific Island countries by foreign-based vessels is substantial and in some cases the major source of government revenue for some countries. In the Caribbean region, of significance is the economic value of tourism and recreation related to coral reefs – in 2009 the region earned over USD 39 billion from tourism, representing about 12.4 percent of GDP, and employed over 30 percent of the labor force in the smaller island sates.
A major challenge facing SIDS is how to best cope with the devastation from weather-related extreme events and what kinds of mechanisms can be put in place to adapt to the longer-term foreseeable impacts of climate change and sea level rise. They are a group of countries that have contributed the least to the emission of greenhouse gases but they and other developing countries are the most vulnerable to the effects of climate change and have the least capacity to adapt to these changes.

The consequences have been deadly and costly – loss of lives, destruction of infrastructure, increasing debt, reduced economic growth, rising unemployment, and social unrest. These events have forced governments to divert resources from education and other areas to address disasters and impacts, very likely resulting from climate change. In 2010, SIDS were devastated by a series of weather-related events. The latest of these events was a late-season category one hurricane, Hurricane Tomas, which caused loss and damage of over 50 percent of St. Lucia's gross domestic product (GDP).

International support for adaptation strategies for SIDS has not been adequately implemented to enable SIDS to increase their resilience to the dangerous impacts from climate change, including those that are already occurring. Thus, SIDS continue to grapple with increased frequency and intensity of natural disasters such as cyclones, floods, tsunamis or droughts, some due to the effects of climate change.

Current Status of Loss and Damage in SIDS and the UNFCCC Process

Going back to the first meeting of the UNFCCC, the Alliance of Small Island States (AOSIS) has been insisting on an agreement on a mechanism to address the risk posed to sustainable development from the projected impacts of climate change. Para 26 of the COP 16 decision calls for the establishment of a work program under the SBI. This is in preparation for a decision to establish an international insurance mechanism in the future (the decision should be taken in two years time, at the 2012 COP18). Para 28 invites Parties and relevant organizations to submit ideas about the work program elements to the UNFCCC Secretariat by 21 February 2011. This submission provides AOSIS´ views and information on what elements should be included in the SBI Work Program on Loss and Damage, as articulated in paragraphs 25 – 29 of Draft Decision - / CP.16[1], and ideas about the activities and timing of the work program[2].

1. **Goals of the SBI Work Program on Loss and Damage:**

The Work Program on Loss and Damage should be an ongoing program cycle, including planning and implementation of activities which considers approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change[3]. AOSIS would like to see a decision on its proposal for an international insurance mechanism at COP18, as part of ongoing efforts under the Convention to address loss and damage. To prepare for this and complementary decisions at COP18, AOSIS recommends that the Work Program provide a framework for activities between SB34 and SB37. These activities should prepare Parties with responses to their questions and help prepare them with the knowledge base needed to make a decision about implementation of a loss and damage mechanism at COP18[4]. The SBI Work Program will **catalyse existing and future activities on loss and damage** through exchange of ideas between Parties and experts. Activities could include workshops, events, and extensive dialogue with relevant experts and stakeholder organizations[5].

[1] Para 28
[2] Para 27
[3] Para 26
[4] Para 29
[5] Para 28(d)

It would also be desirable that the Work Program advances understanding of loss and damage that results from climate change while simultaneously providing insights into how to reduce such impacts on an ongoing basis[6]. Additionally, the SBI Work Program should strengthen international cooperation and expertise to more effectively reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events[7].

2. Themes for discussion for the SBI Work Program on Loss and Damage

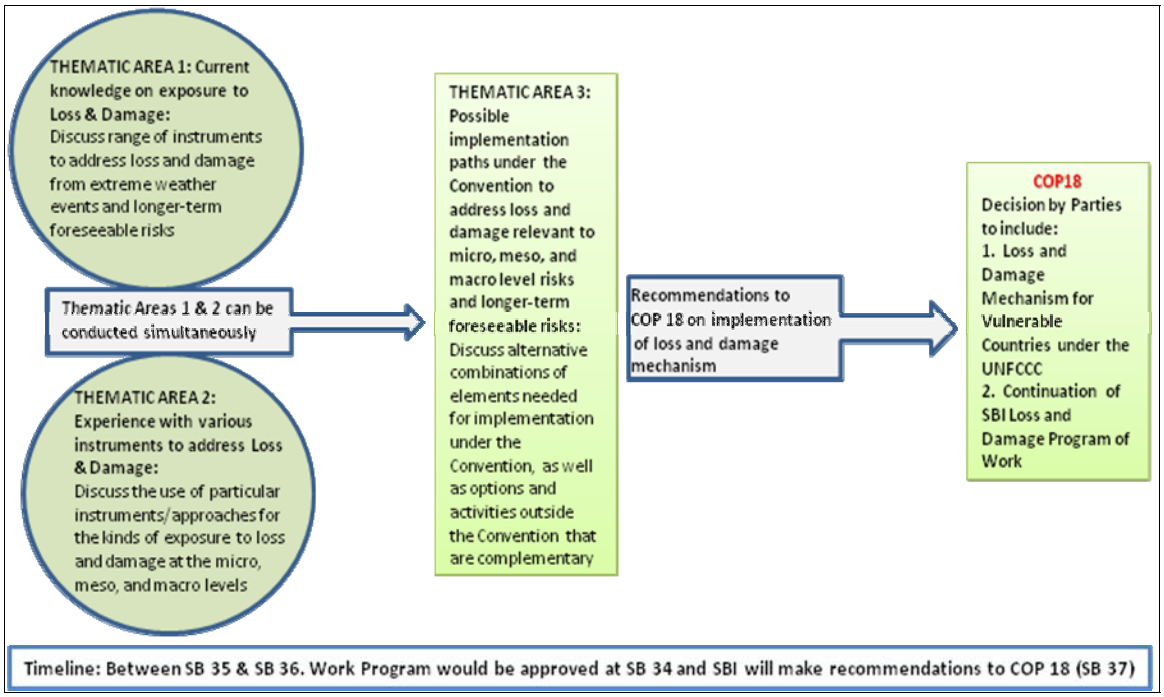
The SBI Work Program should have three thematic areas: 1) Current knowledge on exposure to loss and damage; 2) Experience with various instruments to address loss and damage; 3) Possible implementation pathways under the Convention. These three thematic areas are suggested for consideration by Parties in order to provide guidance in planning, designing, and implementing measures to address loss and damage, and to support the formation of recommendations for COP18. These three areas are outlined below (the elements from paragraph 28 (a - c), with the following section that lists activities and recommended timelines of areas.

1) **Current knowledge on exposure to loss and damage[8]**: This thematic area addresses loss and damage from extreme weather events[9], and longer-term foreseeable risks[10]. This area could also explore tools needed to help Parties characterize exposure through rapid-onset events like weather extremes, or through slower-onset foreseeable events related to climate change (tools could include risk assessments, mapping, typologies of assets exposed to loss and damage). This is a point of departure for thinking about what kinds of tools have been used or could be used to address different kinds of exposure in vulnerable countries.
2) **Experience with various instruments to address loss and damage[11]** at the community, national, and regional levels[12], and in the longer-term[13]. Relevant experts and stakeholder organizations could support Parties in exploring the use of particular instruments/approaches for the kinds of exposure to loss and damage at the micro, meso, and macro levels. This area should articulate lessons learned, good practice, challenges, analysis of relevance of various instruments.

[6] e.g. leading beyond COP18, with a time period to be defined or open ended as appropriate
[7] Para 25
[8] Exposure could be assets like man-made (such as infrastructure), natural (such as ecosystem services like fresh water), and social (such as livelihoods). As the SBI Work Program focuses on issues related to the implementation of measures to address loss and damage, there may be an argument for addressing the first three assets (man-made, natural, and social), and recognizing the importance of (but not valuing) things like human life, culture, and ethics which are of inestimable worth and value.
[9] Paras 28(a) and 28(b) deal with weather variability and extreme events (often of a rapid-onset nature).
[10] Para 28(c) refers to longer-term foreseeable exposure to loss and damage, such as sea level rise and desertification processes.
[11] Para 28 (b and c).
[12] Paras 28(a) and 28(b) deal with weather variability and extreme events (often of a rapid-onset nature).
[13] Para 28(c) refers to longer-term foreseeable exposure to loss and damage, such as sea level rise and desertification processes.

3) **Possible implementation pathways under the Convention** [14] to address loss and damage relevant to micro, meso, and macro level risks[15], and longer-term foreseeable risks[16], as appropriate. This area would explore alternative combinations of elements needed for implementation under the Convention, as well as options and activities outside the Convention that are complementary. Discussions in this area could explore implementation options, depending on different c**ombinations of issues such as Party need**s, institutional arrangements/ operational entity, governance considerations, alternative financial arrangements, etc. Implementation options should consider placing the avoidance and reduction of loss and damage as a leading priority.

Figure 1: Discussions in the SBI work program on loss and damage



[14] Para 28 (a, b and c). Once Parties have had a chance to examine areas of concern (assets at risk of loss and damage), the range of possible tools to address rapid-onset events and longer term foreseeable events and their functions, then Parties can begin considering options for development of approaches to address loss and damage. These options could outline design elements for approaches for managing rapid-onset loss and damage issues (climate risk insurance facility and other forms of insurance linked to disaster risk reduction) and for managing foreseeable slow onset processes (options for operational design for such approaches).

[15] Paras 28(a) and 28(b) deal with weather variability and extreme events (often of a rapid-onset nature).

[16] Para 28(c) refers to longer-term foreseeable exposure to loss and damage, such as sea level rise and desertification processes.

3. Elements that should be included in the Work Program up until COP18

Three elements are proposed for inclusion in the SBI Work Program on Loss and Damage, corresponding to the three areas noted in para 28 (a, b, c) where SBI should make recommendations to Parties by COP18. The areas would support the goals outlined above, supported where desired by engagement of relevant specialized expert stakeholders[17].

- **Element** 1: Micro and meso level risks of loss and damage at the sub-national and national level (Para 28(b) options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification).
- **Element** 2: Macro level risks of loss and damage at the country **and regional** level (Para 28(a) Impacts associated with severe weather events).
- **Element** 3: Longer-term foreseeable loss and damage (Para 28 (c) Approaches for addressing rehabilitation measures associated with slow onset events).

Throughout the discussions until COP18, it would be particularly helpful for Parties to consider the combination of disaster risk reduction (i.e. the avoidance of loss and damage) with tools such as risk transfer (i.e. insurance), and rehabilitation/recovery once loss and damage have occurred. Instruments should ideally work in harmony in a larger framework aimed at expanding adaptation options while avoiding or limiting loss and damage. For example, a range of tools exist to address the kinds of weather variability: pre-hazard activities such as community preparedness, risk reduction, infrastructure fortification, risk pricing and risk transfer tools (ex ante tools); disaster management when events occur such as evacuation, humanitarian assistance, etc.; post-disaster activities such as reconstruction and rehabilitation, planning for better preparedness etc. In each of these phases of the disaster cycle, there are specific instruments that could be considered by Parties. It would be useful to focus especially on experience with instruments which have been designed to avoid or reduce loss and damage, or discussing how the existing range of instruments could be altered where needed to emphasize the need to avoid or reduce loss and damage.

Figure 2 below illustrates these areas. The areas are meant to start as soon as SBI approves the Work Program on Loss and Damage; but as noted above it would be highly desirable for the **Work Program to continue after COP18** to support Parties in questions related to the implementation of approaches to loss and damage.

Elements 1, 2, and 3 could either be **separate agenda items in one discussion**, **OR** could be undertaken as **separate but complementary discussions.** It is helpful **to frame the discussion** i**n terms of clea**r areas. This could be in the form of clearly defined agenda items, or as complementary but different discussions. It would be useful for **progress in one element is not dependent on progress in another**. A clearly structured and transparent structure will encourage innovative thinking, and solutions-oriented approaches that support Parties in their goal to increase understanding of loss and damage issues. Additionally, the approach will ensure that discussions

focus on solutions-oriented discussions which help the articulation of implementation options which can then be sent to COP18 for consideration.

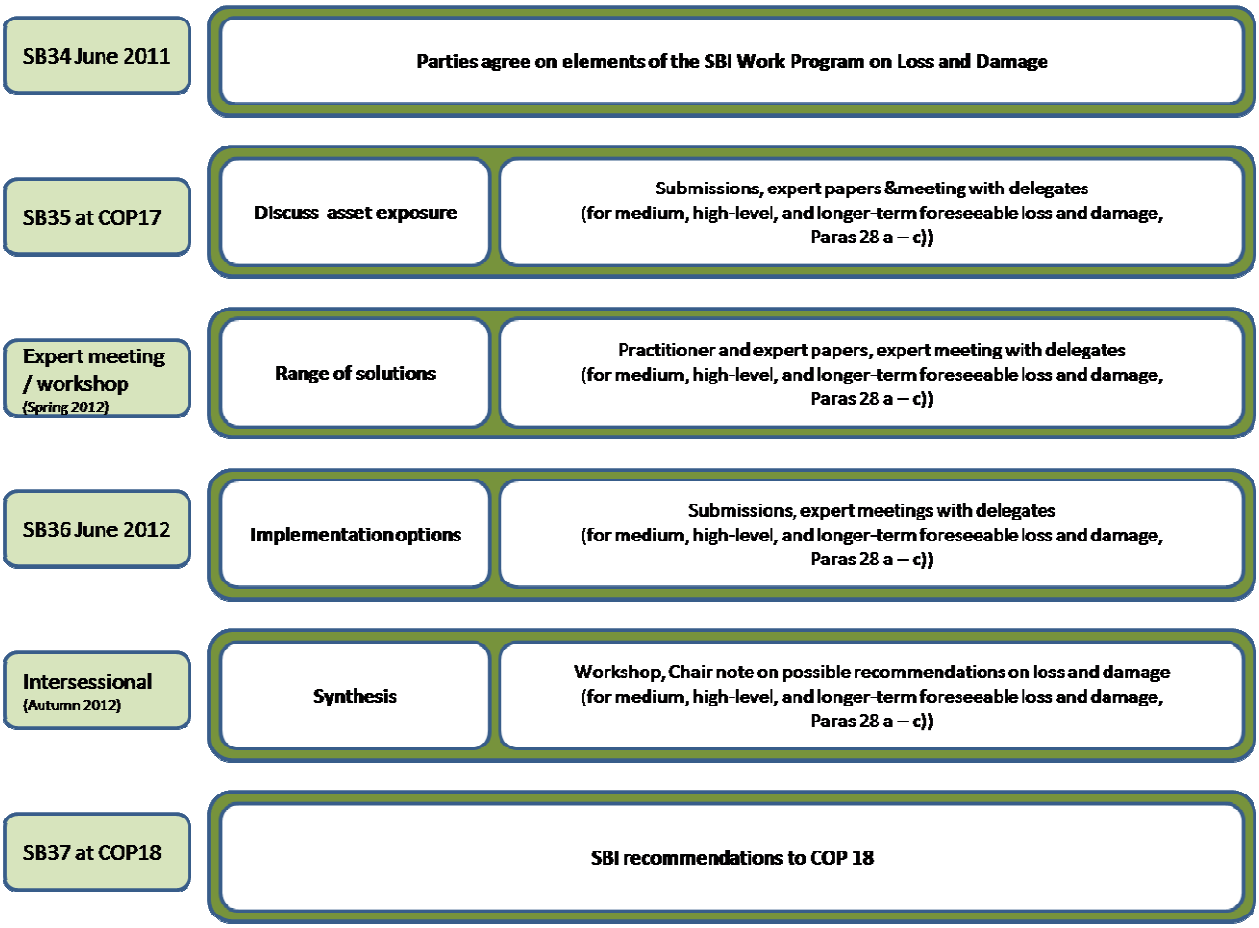
4. Activities and timeline of Elements 1, 2, and 3 (from SB34 to SB37)

Elements 1, 2, and 3 will be structured in a manner that helps Parties explore approaches to address loss and damage[18]. The structure will include workshops, expert meetings as appropriate, approaches to address loss and damage. The Work Program on Loss and Damage should have an lifespan of a few years, as defined by Parties. However, the first year and a half would concentrate on exploring themes that support delegates in decisions about design of a risk management approach for adaptation (for a decision at COP18). The Work Program content could address the three elements and discussion themes in the period between the 34th and 37th sessions of SBI.

Figure 2 below illustrates what the structure of the Work Program could look like between SB34 to SB37, after which the SBI would make recommendations to COP18. Following this illustration, the document has a general description of the kinds of activities that could take place during each time period. If desired, each discussion theme could have well-defined calls for submissions, expert meetings, workshop, etc. as defined by Parties. As an option, the Work Program on Loss and Damage could combine the elements across the areas (such as having a call for submissions about asset exposure, but request submissions to be clearly organized along the lines of the areas – micro, meso, and macro level risks, and longer-term foreseeable loss and damage). The call for submissions should be defined in a way that does not require progress in one area to make progress in another—as stated earlier, the elements of the Work Program should be organized in a way that progress (or lack thereof) in one area is not a condition for constructive discussions in another.

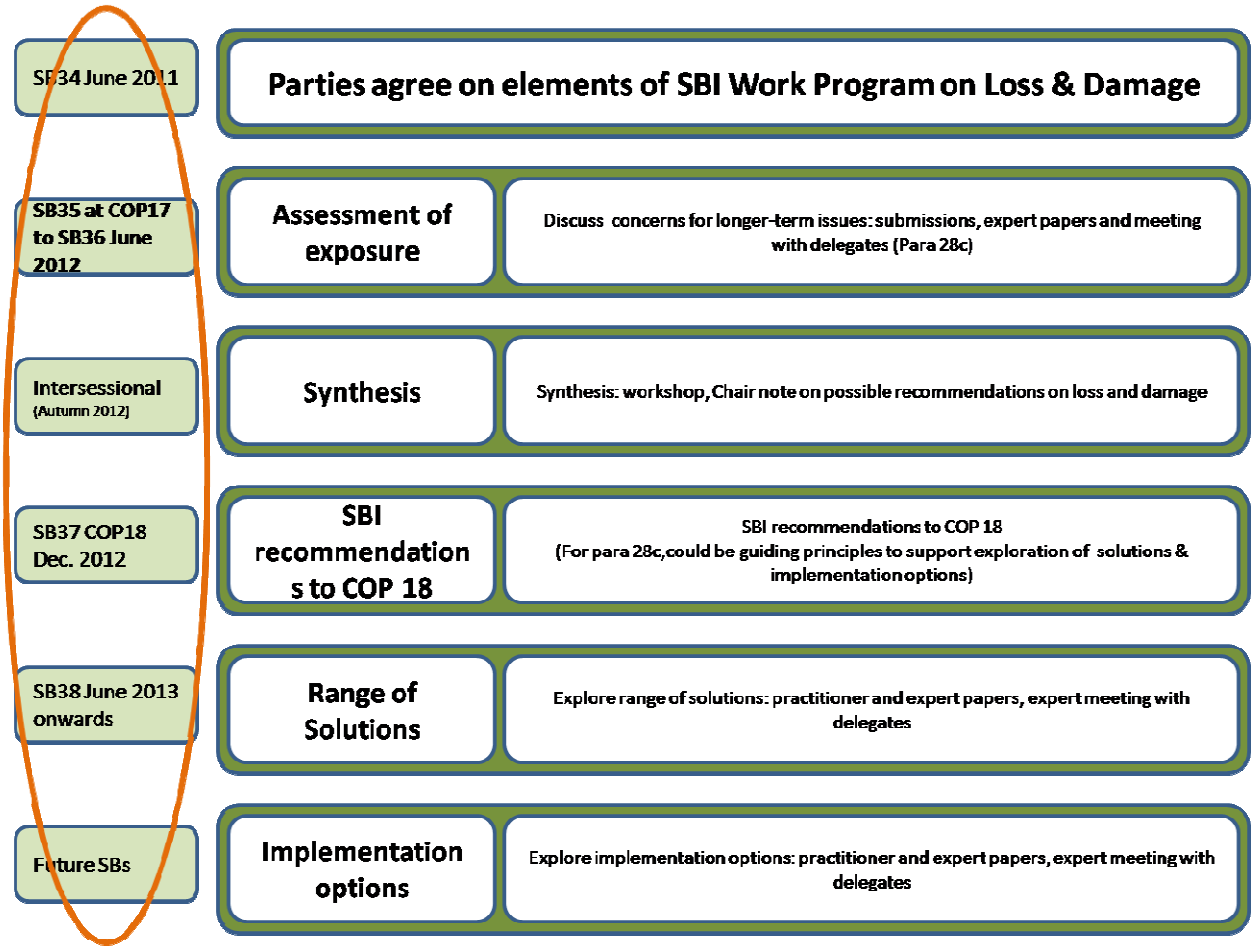
[18] Para 26

Figure 2: Parallel areas, activities and timeline between SB34 and SB37



Note about timing: Figure 2 above suggests a general way for structuring a flexible Work Program to fit the state of discussions and the underlying knowledge base. For example, Figure 3 below shows a possible option for Element 3 (longer-term foreseeable loss and damage). Parties may find that this topic requires a different amount of time to discuss, as the articulation of approaches to manage loss and damage from foreseeable longer-term processes like sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification may be in an early stage. If one Element requires substantial time, this should not be an obstacle to progress in the other two Elements. The SBI Work Program on Loss and Damage should support Party discussions on an ongoing basis, in part for the reason that some Elements (possibly such as longer-term foreseeable loss and damage) may require time beyond COP18 to consider implementation options.

Figure 3: Possible option for Element 3 (longer-term foreseeable loss and damage)



5. Work Program on Loss and Damage Beyond COP18: Ongoing process of knowledge transfer on loss and damage to facilitate implementation.

Up until and beyond COP18, the Work Program will represent an ongoing process of knowledge accumulation and transfer to support better understanding of loss and damage issues. The Work Program will: 1) provide a continuing channel to bring relevant expertise about the management and reduction of loss and damage to Parties, 2) collect archiving information and experience from implementation of approaches to manage and reduce loss and damage, including risk reduction and insurance measures in various areas of the world.

6. Conclusions

AOSIS has proposed a Work Program that has a framework of three strategic discussion themes aimed at providing Parties with information to better understand the challenges presented by loss and damage. The Work Program also provides a method for capturing the experience in the use of risk management, risks transfer and other financial instruments, as well as non-financial instruments to minimize impacts.

It is the expectation that the Work Program would commence in June 2011, and that all Parties will find it a useful framework in which to address what has long been a major cause of concern by small island states. It is further expected that by COP 18, Parties will be in a position to agree on the need for a loss and damage mechanism to be implemented

Paper no. 8: Hungary and the European Commission on behalf of the European Union and its member States

SUBMISSION BY HUNGARY AND THE EUROPEAN COMMISSION ON BEHALF OF THE EUROPEAN UNION AND ITS MEMBER STATES

This submission is supported by Albania, Bosnia and Herzegovina, Croatia, Iceland, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey.

Budapest, 15 February 2011

Subject: **Views and information on what elements should be included in the loss & damage work programme**

Introduction

1. The EU welcomes the decision in Cancun to initiate a process to establish a work programme to explore how to give impetus to enhanced action on loss and damage. The EU agrees on the need to strengthen international cooperation and expertise to understand and reduce loss and damage associated with the adverse effects of climate change, especially in developing countries that are particularly vulnerable to the impacts of climate change. While it is not possible to distinctly attribute the extent of the damage costs related to anthropogenic climate change, it is important to recognise that long-term changes in climate at continental, regional and ocean basin scales have been observed including aspects of extreme weather. As such it is important to enhance international cooperation to not only understand how to best plan and respond to this situation but also to enhance preparedness by strengthening and mobilising the necessary expertise in accordance with the principle of common but differentiated responsibility.

Arrangement of Work

2. In defining a work programme, it will be important to consider the substantive work undertaken under other strands of work under the UNFCCC and ensure coherence with the deliberations under 1/CP.10 on risk reduction and risk management, which are large in scope but procedurally limited in time. Rather than proceeding in parallel tracks of discussion, we propose a new agenda item on adaptation to the adverse effects of climate change that includes assessment of the status of implementation of adaptation to the adverse effects of climate change and the work programme on approaches to address loss and damage associated with the adverse effects of climate change.

Considerations for the programme of work

3. The Cancun decision outlines some elements for a programme of work on this issue. While the EU regards insurance as an important tool to share risk, we do not think that – based on existing proposals - a single insurance facility would be a viable or effective option. We do however believe that it is important to draw lessons from existing regional and national catastrophe insurance schemes as well as micro insurance schemes, in order to provide information and facilitate the establishment of similar schemes or facilities at the national or regional levels, where appropriate. In this regard, we do see value in meeting with the key stakeholders to discuss the lessons learnt, challenges and best practices which would inform the COP when providing guidance to Parties. Furthermore, such information would be valuable to relevant stakeholders seeking to establish similar initiatives.

4. With regard to gradual changes and their related impacts it is important to take advantage of the lead time, and explore all approaches, including planning and other regulatory options. Particular attention should be given to prevention, with mitigation of greenhouse gas emissions being the first step. Significant expertise exists outside the UNFCCC process and needs to be built on. In the EU's view the work spanning over eighteen months of the Work Program on Loss and Damage could be devoted to building the knowledge and understanding of the range of approaches for loss and damage that are available, including functions addressed and instruments used. As such, this would facilitate the cooperation between Parties as they strengthen their efforts in designing appropriate approaches to risk management and loss and damage.

5. The thematic work could be divided in three time periods: June – December of 2011; January – May 2012; June – December 2012. The work programme should specify concrete deliverables and a limited number of meetings to meet the above goals. The outcomes of the work programme could be compiled and made available to relevant organisations and stakeholders and serve as an input to the COP's deliberation on what further action may be required.

Paper no. 9: India

Elements of Work Programme on Enhanced Action on Adaptation: Elements of the Work Programme

India welcomes the opportunity to submit views on the elements of the Work Programme relating to the Enhanced Action on Adaptation in accordance with the Decision taken at the sixteenth Conference of Parties to United Nations Framework Convention on Climate Change and pursuant to paragraph 28 of the decision on Ad-hoc Working Group on Long-term Cooperative Action. Vide the aforesaid Cancun Agreements Parties have been invited to furnish submissions on the possible elements of the Work Programme.

India considers that the Work Programme on Enhanced Action on Adaptation must catalyse and ensure greater action on adaptation at all levels. It should strive to promote climate resilient development responding to national, sub-national and local needs with the involvement of all relevant stakeholders. The Work Programme must be based on the best available scientific knowledge and information. The programme must also recognize the urgent and immediate needs of vulnerable countries especially least developed Countries (LDC) and Small Island Developing States (SIDS). Possible development of a climate risk insurance facility to address impacts associated with severe weather events; Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification; Approaches for addressing rehabilitation measures associated with slow onset events; Engagement of stakeholders with relevant specialized expertise. The Adaptation Committee has been visualized as a Technical Advisory Committee for the programme on Enhanced Action on Adaptation. Accordingly, the various actions required on the programme should be in seize of the Committee.

The Work programme in generic terms should focus on addressing the following elements –

a. **Impact and Vulnerability Assessments –**
   The Adaptation Committee may undertake a review of tools, methods and techniques for the assessment of impacts, vulnerability and adaptation. The review should address issues of usability and reliability, and will be used to refine the existing databases and compendia maintained by the UNFCCC Secretariat.

b. **Adaptation tools and approaches –**
   The Committee should prepare sector-wise compendium of the adaptation tools and approaches that implemented across the globe. This should include issues such as indicators and metrics. It may also guide the beneficiaries with respect to the best practices and the adaptation approaches that can be replicated to other regions and other sectors. Under the guidance of the committee, a mechanism for making

available the adaptation practices can be developed and maintained which will serve as a readily available source for most professionals.

c. **Insurance-based approaches for adaptation and climate risk management -** The Committee may have a special group within its members that will actively work on developing an insurance based risk sharing mechanism.

d. **Technology transfer to enhance adaptation**
An expert group within the committee may provide continued guidance to Parties on enhancing transfer of technology for enhanced action on adaptation. It will work on devising new methods to encourage technology transfer.

e. **Stakeholders' involvement in the adaptation process**
The committee will take up country-wise and sector-wise stakeholders consultations which will deliberate upon the components of the work programme and further action needed in the specific areas relevant to the sector or the region. It will also conduct frequent dialogues with stakeholders at different levels to keep them updated on the latest trends in impacts, vulnerability and adaptation assessments.

f. **Integration and mainstreaming**
In practice, adaptation involves mainstreaming climate risk into development planning, resource management and disaster management. The committee may develop suitable interface and syntheses as appropriate.

g. **Capacity building**
The Committee may develop a work programme to facilitate capacity-building at various levels and for different audiences.

The other elements of the work programme should also consider to –

i. Provide access to all developing country parties to high resolution climate change model/s with spatial resolution less than or equal to 10 kmx10km, as the climate in these countries varies at a very small spatial scale, especially in the mountainous regions, including high elevations as well as regions with terrains that are highly undulating.

ii. Provide an opportunity of access and use of these models for undertaking the impact assessments for regions within the country that are highly vulnerable to devise steps/strategies needed to adapt to climate change, especially the countries that have not yet taken the opportunity of doing so through other international programmes (eg. NAPA)

iii. Further, other than exploring rehabilitation of measures for slow onset of events, the work programme should also address to exploring measures for (a) increase in

frequency and intensity of extreme events and (b) abrupt climate changes that might be totally opposite to the current climate change projections for a particular area/regions.

iv. Conduct workshops and training programmes especially designed for implementing agencies and other stakeholders to disseminate knowledge on the state of the art tools for adaptation that range from insurance, new technologies, traditional knowledge, governance including role of institutions and policies that need to govern these institutions.

In so far as the matter pertaining to loss and damages is concerned, the work programme may include elements to assist the especially vulnerable countries to develop and document and disseminate steps to assess loss and damages and steps towards risk reduction for both slow, extreme and abrupt changes. The steps may include immediate response and relief measures; damage and loss assessment; recovery and reconstruction options; steps towards risk reduction; integrating the process in the regular process of development

The Work programme could be devised and designed to include elements of **Assessment of Adaptation** needs, planning and action *inter alia* on the following –

i. Identifying vulnerable communities, areas and ecosystems based on and guided by the best available methodologies and tools informed by science, as appropriate, traditional and indigenous knowledge;
ii. Impact, vulnerability and adaptation assessments, including assessments of financial needs as well as economic, social and environmental evaluation of adaptation options;

iii. Promoting understanding of impacts of, and vulnerability to, climate change, current and future climate variability and extreme events, and the implications for adaptation;

iv. Improving climate-related research and systematic observation for climate data collection, archiving, analysis and modeling for improved climatic-related data and information to decision-makers at local, national and regional levels;

v. Promoting the development of, access to, and use of information and data on projected climate change to facilitate adaptation

vi. Improvement of adaptation planning, measures and actions, and integration with on going development actions at the local and national levels;

vii. Planning, prioritizing and implementing adaptation actions, including projects and programmes, and actions identified in national and sub-national adaptation plans and strategies, national adaptation programmes of action of least developed countries, national communications, technology needs assessments and other relevant national planning documents;

viii. Promoting synergies and strengthening engagement with national, regional and international organizations, centers, networks, to enhance the implementation of adaptation actions;

Further the Work Programme should aim to address and e**nhance adaptive capacities at different levels.** These activities need to be carried at local, national and global levels. The various elements could include –

a. Strengthening institutional capacities and enabling environments for adaptation, including for climate-resilient development and vulnerability reduction;

b. Building resilience of socio-economic and ecological systems, including through economic diversification and sustainable management of natural resources; strengthening, consolidating and enhancing the sharing of relevant scientific, technical and technological information, knowledge, experience and good adaptation practices, at local, national, regional and international levels, as appropriate;

c. Promoting research, development, demonstration, diffusion, deployment, and transfer of appropriate adaptation technologies, practices, and processes; and capacity-building, particularly addressing identified adaptation priorities and building on lessons learned from current adaptation projects and strategies:

d. Provision of information on good adaptation practices with a view to improving decision-making on adaptation action.

e. Strengthening data, information and knowledge systems, education and public awareness;

f. Enhancing climate change related disaster risk reduction strategies, considering the Hyogo Framework for Action where appropriate; early warning systems, risk assessment and management, and sharing and transfer mechanisms such as insurance, at local, national, sub-regional and regional levels, as appropriate;

g. Facilitating communication and cooperation among relevant organizations, business, civil society and decision makers, and other stakeholders;

Paper no. 10: Indonesia

SUBMISSION BY INDONESIA

Proposal by the Government of Indonesia on

possible elements of the work programme to consider approaches to address loss and damage associated with climate change impacts in developing countries

With reference to paragraph 28 of the Decision 1/CP 16 on the Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention, Indonesia herewith submit its views on the possible elements of the work programme to consider approaches to address loss and damage associated with climate change impacts in developing countries, including impacts related to extreme weather events and slow onset events (referred as "loss and damage"), as follows:

A. Definition, scope and other related issues of the loss and damage mechanism:

A.1. Review various possible definition of loss and damage based on the existing proposals, which will cover, inter alia, the definition of the direct and in-direct impact of climate change;

A.2. Define the scope of the loss and damage, including its mechanism;

A.3. Stock take relevant and potential methodologies to measure loss and damage;

A.4. Consider relevant financial aspects with a view to develop possible instruments for loss and damage, including: potential source of fund and distribution arrangement to developing countries as well as potential insurance scheme in particular through the private sector involvement;

A.5. Establish demonstration activities to address potential loss and damage in adaptation activities at all level;

A.6. Consider institutional mechanism and arrangement, including its linkage to the other existing institution related to loss and damage mechanism, at national, regional and international level.

B. Loss and damage data base management:

B.1. Consider working methods to manage data and information for loss and damage at national, regional and international level;

B.2. Develop a mechanism to measure, record, and verify loss and damage caused by climate change

C. Capacity building activities:

Enhance capacity in developing countries, in particular the most vulnerable ones as stipulated in the convention and related COP Decisions, to address loss and damage, including financing and methodological aspects as well as transfer of technology.

Jakarta, 21 February 2011

Paper no. 11: Japan

Japan's submission on the work program to consider approaches to address loss and damage

Japan welcomes its opportunity to submit its view on the work program to consider approaches to address loss and damage associated with climate change impacts in developing countries.

1. Japan believes that, in order to build strategies for addressing losses and damages, it is necessary to gather scientific information related to possible effects of climate change. Therefore, the work plan needs to include analysis and organization of necessary information, (e.g. meteorological data such as rainfall data), its availability, necessary infrastructure (e.g. monitoring stations) in both quality and quantity aspects, and corresponding methodology (e.g. insurance mechanisms).

2. Recognizing the timeline of the work program, which will be considered at the COP18, and available resources and capabilities, the work program should focus on substantial discussion by experts, avoiding discussion with political nature.

3. Finally, Japan would like to reaffirm that it is important not only to consider approaches to address losses and damages but also to promote preventive measures.

Paper no. 12: Malaysia

PARAGRAPH 28: VIEWS ON ELEMENTS TO BE INCLUDED IN THE WORK PROGRAMME

Malaysia welcomes the decision to establish a work programme in order to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change.

Malaysia is of the view that the work programme can give due consideration to the following elements:

(i) Climate Risk Insurance Facility;
(ii) Options for Risk Management and Reduction, Risk Sharing and Transfer Mechanisms;
(iii) Approaches for addressing rehabilitation measures associated with slow onset events; and
(iv) Engagement of stakeholders with relevant specialised expertise.

The establishment of the climate risk insurance facility is long overdue. In this regards, a clear Terms of Reference (TOR) for this facility is needed.

Malaysia would like to reiterate that the climate risk insurance facility should not be used as a mechanism where the responsibilities of the Annex I countries as stipulated by Articles 4.4, 4.5 and 4.8 of the Convention are shifted to this facility. Annex I parties should commit public funds that are adequate, predictable, stable and timely to address issues relating to adaptation. The Climate Risk Insurance Facility should only supplement adaptation funding by Annex I parties.

Malaysia would also like to reiterate further that the facility must not increase the financial burden on developing countries.

Paper no. 13: Mexico

Submission by Mexico

Views and information on elements for a work program to address loss and damage associated with climate change impacts in developing countries

February, 2011

Mexico appreciates very much the opportunity to express views and information on what elements could be included in the work program to address loss and damage associated to the adverse effects of climate change in developing countries that are particularly vulnerable to climate change.

We support the development of a multi-phase work plan that results on immediate activities to face loss and damage caused by climate change effects by building resilience and reducing vulnerabilities in developing countries particularly exposed to those effects. These activities could be part of preparation for future global response to climate change.

The work plan may include addressing issues through the development of experts meetings, which may have as one of their outputs recommendations for further analytical work, to be supported by the Convention and taking into consideration progress of the special report on risk, currently in progress by the IPCC. The outcomes of this assessment report are crucial to evaluate what mechanisms (prevention, insurance, compensation, rehabilitation or any other) could be identified, prioritized and developed.

Among the main aspects that we consider need to be addressed as part of the work for building resilience and reducing vulnerabilities are:

- Identify and evaluate risk and exposure to it,
- Strengthen response capacities to climate events, and
- Develop or enhance mechanisms to recover from damaging events by reducing vulnerability

Considering foreseeable imminence of severe climate events that may affect developing countries, this work plan could include two phases.

The **first phase** could focus on the immediate implementation of measures that pave the way for future agreed actions and respond to climate change consequences already happening, it is recommended that this plan takes into account the outcome of the mid-term review of the Hyogo Framework for Action to consider previous efforts already made to build communities resilience. This part of the work plan could establish a schedule for expert meetings and workshops for allowing vulnerable countries to:

A) Construct a set of homogeneous methods or adjust those already existing to allow countries to learn about their climate risks and exposure to them. These methods could include the use of technological platforms to analyze and visualize dynamic risk scenarios which may aid in public policy decision-making for integrated risk management. The risk management could envision building of systems and procedures to predict short, mid, and long term risks.

To build upon these methods it is required that accurate and reliable data is properly processed in order to count on effective risk management systems.

To develop such information and systems each country could identify existing useful information related to climate phenomena and in case of lack of data, identify opportunities to produce them with the purpose of integrating databases of loss and damage occurred from past events and may establish procedures to asses economic and social impacts from a given event as well as further useful information.

Based on meaningful information it is desirable to elaborate, as deemed fit, scientific maps of current and future climate risks under the basis of scenarios and by integrating geo-referenced databases on exposed goods to the damaging effects of climate risks.

Information collecting and processing could also allow measuring access to prevention mechanisms and resilience of diverse social groups, with the aim at increasing economic, political, social, cultural, and environmental factors that improve such access.

B) Strengthen capacities to manage consequences of disturbing events related to climate change. Preparedness on the work plan could include meetings and a set of cooperation mechanisms so that vulnerable countries can complete at least 5 stages in their capacity building:

1. Identify or appoint a national authority in charge of implementing policies and actions for adaptation that includes risk reduction and management. Where possible, this authority may be the one in charge of disaster risk reduction, and could also be involved in making development policies to ensure integration between adaptation intended policies and development planning.
2. Identify and enhance capacities on events prediction and early warning systems.
3. Identify means and implement plans for public awareness on risks, prevention, and post-event actions.
4. Build partnerships and get commitment from other actors such as social and private sectors, to be involved in prevention and response plans.
5. Make an inventory of available expertise for disturbing events management, aiming to identify cooperation opportunities.

C) Create resilience for their communities through the adoption of integrated risk management. This approach could include governmental actions different from risk and emergency management, which will progressively reduce climate change effects impact in communities. Expected loss and damages caused by climate change effects may be significantly reduced by having resilient communities. Among other measures, Mexico highlights the importance of the following key issues for this purpose:

- Ensure that land-use and development planning consider sustainability criteria including reduction of exposure to climate risks.

- Implement effective public awareness on risks is crucial to avoid human losses. Participation of government, social and private sector at the lowest level allows spreading of self-protection awareness. Local policies and public participation to reduce exposure to risks and to take action in case of a disturbing event have demonstrated effectiveness to reduce loss and damage.

- Establish strong financial provisions to address loss and damages related to climate change effects that progressively become development tools. Financial instruments could be intended not only for recovery from an emergency, but also to move to less risky investments and to create awareness among population and authorities. Since climate change effects are already happening and there will be no immediate remedy, governmental plans need to consider special funds to both face emergencies and reduce vulnerability.

- According to its experience, Mexico suggests vulnerable Parties to create special funds that count on strict rules and exist in addition to normal budget allocations for national development plans. These funds can be used to finance relief and reconstruction for critical infrastructure in a first stage, and gradually become a tool to reduce risks. The setting aside of financial resources would allow to continue implementation of current development plans even if a climate event occurs. Rules for applying resources from these funds for reconstruction purposes could require that risk reduction criteria are considered. In case of reconstruction of critical public facilities, the federal fund could finance 75% of the total cost and require that recovery envisions exposure to risks for a first occurrence. In the case of a second event hitting the same infrastructure, the federal fund will finance only 50% if damage could be avoided by implementing reduction risk measures. In a third occurrence, the federal fund will support only 25% of reconstruction. Finally, for further damages at the same critical facility the fund will no longer offer financing if no reduction risk measure has been applied. This mechanism of operation could push affected areas to use prevention measures, and will reduce waste of resources on recovering constantly damaged communities or facilities. Furthermore, the investment of funds to implement risk reduction measures will transform reactive into preventive actions.

- As an additional preventive measure, insurance instruments at private, local and national scale could be used, to transfer risk.

- Mexico is willing to share experience in post-event loss-and-damage evaluation, development of systems that allow to analyze and visualize risk scenarios, financial tools (i.e. extraordinary allocations, special funds) for disaster risk prevention and to respond to emergency insurance mechanisms in the agriculture sector and catastrophic bonds for disasters using climate indices, programs to build resilience at local level, among others.

D) Create capacities to make effective use of international cooperation. Vulnerable countries could create basic conditions to easily and effectively receive, apply and benefit from other countries' experiences, training, equipment, and other shared resources.

The **second phase** could be intended to prepare long term strong response to climate phenomena. The Adaptation Committee to be created under the Cancun Adaptation Framework could analyze and define proposals to be considered by Parties in the future, for possible decisions on scientific-based standard measures for vulnerability, and damage and loss quantification. It is crucial to agree on methodologies and measure systems that allow comparison and application of standard criteria to vulnerability conditions. Proposals on financial and risk transfer mechanisms, technology transfer mechanisms to face slow onset events and mechanisms to involve private and social sectors could also be discussed.

The work program may be designed using as general guidelines, the following:

- Use of the concept of integrated risk management that includes among others land-use and development planning considering sustainability criteria, transfer and reduction of current risks, establishment of early warning systems, and capacity building to face climate change adverse effects.
- Necessity of definition for regional, national, subnational and local vulnerability levels.
- Emphasis on prevention and capacity building to face adverse effects of climate change.
- Suitability of sharing and disseminating relevant international experience and good practices on risk management, transfer mechanisms, and addressing loss and damage related to climate change.
- Necessity of exploring synergies and gaps with other mechanisms and international organisms related to this subject, such as the World Meteorological Organization, UNDP, UNEP, the International Strategy for Disaster Reduction, among others.

Paper no. 14: New Zealand

SUBMISSION TO THE AD HOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION UNDER THE CONVENTION

PARAGRAPHS 25 - 28: WORK PROGRAMME TO CONSIDER APPROACHES TO ADDRESS LOSS AND DAMAGE ASSOCIATED WITH ADVERSE CLIMATE CHANGE IMPACTS IN DEVELOPING COUNTRIES

18 FEBRUARY 2011

1 This submission responds to the invitation to Parties to submit views and information to the Secretariat on elements for inclusion in the Work Programme to address loss and damage, including on a possible climate risk insurance facility (paragraphs 25-28 of FCCC/AWGLCA/2010/L.7 refers).

2 New Zealand welcomes the establishment of a work programme to consider approaches to loss and damage, and the process for expert-level engagement in the negotiations.

3 There are a number of possible options for dealing with loss and damage, insurance being one of these. The work programme process should include an investigation of all possible options, to identify which option is most effective for the Parties concerned, bearing in mind that the most appropriate option may differ according to local context and circumstances.

4 New Zealand sees the role of the Convention as coordinating and catalysing activity to facilitate discussion amongst relevant parties, including development and private sector experts, to share ideas and information.

5 Maintaining the primacy of the country-driven approach to adaptation, the work programme should bring together experts from both inside and outside governments and from inter-governmental organisations, to share ideas and information on lessons learnt, to develop best practice on reducing loss and damage from the adverse effects of climate change on developing countries. Parties could identify the agency(ies) working on adaptation in their countries to engage in these discussions.

6 These discussions should include an examination of the need for and suitability of insurance mechanisms taking into account different regional characteristics and circumstances. The work programme should facilitate expert-level discussions with private and public sector experts to investigate existing systems and flesh out various options for and suitable alternatives to an insurance mechanism, with a view to achieving a better understanding of the various options available with a view to informing eventual decisions on suitable solutions.

7 The work programme should involve experts from all sectors engaged in adaptation, loss and damage reduction and disaster risk management processes, including the private sector and development practitioners, and take into account the following considerations:

a Existing synergies within and between countries should be identified and maximised, including the incorporation of adaptation and risk reduction practices into bilateral and regional development programmes;

b Links should be made to existing disaster risk reduction work as appropriate, including the UNISDR and Hyogo Framework;

c Possible adaptation, risk reduction and insurance measures considered under the work programme should be suitable for country and regional contexts, taking into account the diversity of country situations and vulnerabilities, and regional governance mechanisms;

d The work programme should ensure supported adaptation, risk reduction, loss and damage avoidance, and possible insurance measures can achieve efficient and cost-effective outcomes, including in relation to other possible alternative approaches;

e The work programme should take account of other work underway by the COP, to ensure coherence with financial and technology mechanisms and avoid duplication with existing institutions.

8 New Zealand looks forward to engaging on these matters with interested Parties in Bangkok.

Paper no. 15: Norway

Norwegian Submission on Climate Change Adaptation

1. Norway welcomes the outcome of the Work Programme for the Ad hoc Working Group on Long-Term Cooperative Action under the Convention (AWGLCA) on adaptation and the invitation to make further inputs. We are of the view that the Adaptation Framework will enhance adaptation by all Parties. Norway would like to take this opportunity to raise some issues for consideration on the composition of, and modalities and procedures for the Adaptation Committee, and the work programme on loss and damage.

2. Climate change impacts and vulnerabilities are specific to each country and adaptation must therefore be a country-driven process. Any arrangements to strengthen Parties' adaptation actions must be carefully designed with this in mind.

3. Climate change impacts will affect all sectors and involve stakeholders from all parts and levels of society. The Adaptation Framework should therefore actively involve and include the participation of stakeholders, including indigenous and local communities, women, children and youth.

4. Valuable experiences have been gained by adaptation-related efforts already undertaken within and outside the Convention by Parties, UN agencies, international organizations and non-governmental organizations. It is therefore incumbent on Parties to ensure that the Adaptation Framework draws on these experiences. Hence, the inclusive and open approach which characterises the Nairobi Work Programme should guide the initiatives taken under the Adaptation Framework.

5. Adaptation is in its early stages and institutional arrangements should reflect that adaptation is very much a multi-sectoral "learning-by-doing" process. Consequently, we need to keep the Adaptation Framework lean and flexible in order to adjust to lessons learnt and experiences gained.

6. With regard to financial support to enhance adaptation in poor and vulnerable developing countries, the link to financial mechanisms both within and outside of the Convention must be adequately addressed.

The Adaptation Committee

7. In Norway's view the Adaptation Committee should ensure that the Adaptation Framework efficiently supports Parties' efforts to adapt to a changing climate. The advice provided by the Adaptation Committee should inform adaptation processes taking place outside the Convention, At the same time, the work of the Adaptation Committee should also be informed by relevant processes taking place outside the Convention.

8. Norway notes that financial support for the implementation of adaptation actions will be dealt with within the appropriate fora. The Adaptation Committee has been given a clear mandate to fulfil the functions contained in paragraph 20 of the Cancun Agreement under the AWGLCA.

9. In order to strengthen synergies and efficiency, as well as to avoid duplicating functions within the overall institutional architecture, it is crucial to ensure coherence and linkages between the various institutional arrangements under the Convention. Thus uniform reporting lines from the institutional arrangements to the Conference of the Parties are essential. The Adaptation Committee should report to the Conference of the Parties through the subsidiary bodies. As the subsidiary bodies meet biannually, this reporting structure will provide the necessary flexibility and ensure a continuous flow of information. In addition, there should be joint meetings with other relevant mechanisms and bodies whose activities also include adaptation-related actions, for example the newly-created Technology Executive Committee.

10. The Adaptation Committee should build upon the experiences gained through work that has been and will continue to be undertaken on adaptation both within, and outside of the Convention, thereby galvanising further action. Within the Convention, the Adaptation Committee should be carefully organised to draw on experiences and information already being obtained, particularly under the Nairobi Work Programme and by the funding mechanisms for adaptation under the Convention. This should also encompass other activities implemented by the Parties and other actors (civil society and private sector), with a view to facilitating an effective learning-by-doing approach to adaptation. Modalities and procedures that facilitate the exchange of information between frameworks, organisation and institutions at international and regional level outside the Convention need to be a part of the design of the Adaptation Committee. This includes systems for promoting synergies and coherence in the implementation of multilateral agreements, in particular the other Rio Conventions: the Convention on Bio-Diversity and the Convention to Combat Desertification. In addition, linkages to the Hyogo Framework and the Global Framework for Climate Services that will be established under the World Meteorological Organization will be of particular relevance to the functions that the Adaptation Committee undertakes.

11. Further recognising the multi-sectoral, context specific and local nature of adaptation, the Adaptation Committee should develop procedures for involving different stakeholders, including indigenous groups, local communities, children and youth. Gender expertise should be ensured.

12. The composition of the Adaptation Committee should reflect the multi-sectoral nature of adaptation, and include technical, development, policy and financial expertise. In Norway's view the composition must be gender balanced in accordance with decision 36/CP.7. Norway would suggest that the language in Annex IV, paragraph 3 of the outcome under the AWGLCA regarding the composition of the Technology Executive Committee be taken as the point of departure.

Work Programme for Loss and Damage

13. Norway welcomes the establishment of a two-year work programme for loss and damage. This is a first step in determining the role of the Convention in assisting Parties that face particular challenges related to loss and damage due to climate change.

14. Although this is an issue which has been discussed within the context of the negotiations on the Adaptation Framework, we remain of the view that much more understanding needs to be built on this. We believe that the outcomes of the work programme would be useful in informing relevant initiatives that Parties may take.

15. Norway would therefore like to raise some questions which we would consider useful for the work programme to address in its first phase:
    a. What are the experiences of existing mechanisms, for example the Caribbean Catastrophe Risk Insurance Facility (CCRIF) with respect to assisting their members address loss and damage?
    b. What is the experience of those mechanisms aimed at assisting the poorest that often have no "insurable assets" in the normal sense of the term?
    c. In what ways can insurance be utilised as an incentive for adaptation and disaster risk reduction?
    d. What could be considered "unavoidable damage"?
    e. How can risk management be optimised in the context of extreme weather events to minimize loss and damage?
    f. How can conservation and restoration of functional ecosystems be included to contribute as cost-efficient measures to reduce the risk of disaster (c.f. CBD COP 10 Decision X/33)?
    g. What are the best practises in enhancing capacity to minimize risk related to extreme weather events?
    h. How could one approach risk management in the context of slow-onset events?
    i. What information and data on weather and climate change would be needed, especially for the most vulnerable areas – taking into account the link to the Global Framework for Climate Services?
    j. How can multi-sectorial aspects, such as health, food security, water and sanitation, be included in the context of loss and damage?
    k. What are the main gaps in knowledge in relation to the ways and means of addressing loss and damage?

16. Norway proposes that stakeholder participation and influence is addressed through targeted activities and broad participatory and consultative processes. Given the challenges that women and children face and the enormous resource they represent in developing countries, it would be fundamental to engage them in the design and implementation of risk management strategies. Norway proposes that a workshop is convened on this issue.

17. We would furthermore note that there is a workshop mandated under the Subsidiary Body for Implementation in respect of the Buenos Aires Work Programme (1.CP/10), which will address the issue of identifying challenges and gaps in the implementation of risk

management approaches to the adverse effects of climate change. We believe that this workshop could also provide useful input to the work programme.

18. Likewise, the Special Report which will be adopted by the Intergovernmental Panel on Climate Change later this year on the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation will be a very useful resource for the work programme.

Paper no. 16: Saudi Arabia

SUBMISSION BY SAUDI ARABIA

February 21, 2011

Views on Different Elements of The Cancun Agreement Decision 1/CP16

OVERALL REFERENCE

The COP, at its 16th session, invited Parties to submit to the secretariat, by 21 February 2011, their views on different elements of the Cancun Agreement in Decision 1CP16. Saudi Arabia welcomes the opportunity to submit its views on these important elements

Saudi Arabia emphasizes that the UNFCCC is and will continue to be the main guiding framework for all climate change actions for now and into the future. Therefore, all its principles, rights and obligations, as well as existing annexes shall remain valid for any agreed outcome from Cancun.

In accordance with the Bali Action Plan, the aim of the Cancun Agreement is to enhance implementation of the convention for the present, as well as up to and beyond 2012. Any objectives must be aligned with the objective of the convention and must allow for economic development to proceed in a sustainable manner and ensure that food production is not threatened.

THE ADAPTATION COMMITTEE

Reference from the Cancun Agreement

21. *Invites* Parties to submit to the secretariat, by 21 February 2011, views on the composition of, and modalities and procedures for, the Adaptation Committee, including on proposed linkages with other relevant institutional arrangements;

Views from Saudi Arabia

Saudi Arabia would like to highlight the importance of adaptation to climate change and the impact of response measures to developing countries as a whole. In this regards, we would stress the need to promote development and transfer of technologies that address the adverse impacts

of climate change and the adverse impacts of response measures and finance the removal of barriers to the large-scale transfer of technologies for reducing and adapting to these impacts, including through economic diversification. Such technologies should include those that would improve energy efficiency, and cleaner fossil fuel technologies such as carbon capture and storage, non-energy uses of fossil fuels such as petrochemicals, and technologies that would improve the reliability and cost-effectiveness of alternate clean energy sources, such as solar energy. These technologies will help to improve the resilience of countries that currently rely heavily on revenues from the production, export and consumption of conventional fossil fuels, as well as those that rely heavily on a single source of energy that in this way will have a suite of energy sources.

Saudi Arabia would like to stress the need to establish and enhance grounds to provide financial and technical support, to share experiences, and to take up opportunities, in order to incorporate and integrate adaptation within sustainable development, specifically in the area of adaptation to the impact of climate change and the adverse impact of response measures.

Developed country Parties shall provide developing country Parties with financing that is long-term, scaled up, adequate, new and additional to official development assistance commitments. Financing should be predictable and grant-based, and should be mostly finance from public sources. This is a commitment on Annex I countries as part of the repayment of their climate debt and their historic responsibility for the accumulation of greenhouse gas emissions. Annex I countries should also provide support for technology, insurance and capacity-building to implement urgent, short-, medium- and long-term adaptation actions, plans, programs and projects at local, national, sub-regional and regional levels. Such adaptation plans will cover a wide range of actions in and across different economic and social sectors and ecosystems.

Enhanced action on adaptation should be undertaken in accordance with the Convention; follow a country-driven, participatory and fully transparent approach.

The work of the newly established adaptation committee should include a clear process to advance solutions and opportunities that contribute to sustainable development, through adaptation to the adverse impacts of climate change and the adverse impact of response measures. Specifically, it should establish methodologies to guide Annex I Parties in implementing win-win policies and measures, which have long been requested and advocated by developing countries. Such policies must meet both the need to reduce emissions and the need to minimize adverse social, environmental and economic impacts on developing country Parties, especially those identified in Article 4.8. This should be given a high priority since no methodological work is established under Article 4.8 on these impacts.

It is clear that many developing countries lack the capacity to assess the scope and magnitude of the impacts of climate change and response measures on their own. The UNFCCC should, therefore, promote the exchange of information and sharing of experiences and views, to improve and enhance efforts towards:

a. Understanding of the scientific, technical and socio-economic impact of climate change and the impact of response measures;
b. Identifying innovative and efficient adaptation technologies for both the impacts for climate change and the impact of response measure.

Moreover, the work of the adaptation committee should address capacity building and transfer of adaptive and advanced technologies to adapt to climate change and response measures, as well as assessment of cost effective options, including capacity building and transfer of technology for adaptation, to contribute to sustainable development in the area of adaptation to climate change and adaptation to the adverse impact of response measures;

Adaptation Committee under the Convention should provide coherence in the implementation of the enhanced action on adaptation under the Convention. This Committee shall operate to provide guidance to enhance action on adaptation.

The adaptation committee should also overlook the establishment of an international mechanism to address social, economic and environmental loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change and/or to the impact of the implementation of response measures. The functions of this international mechanism shall include engaging stakeholders with the specialist expertise required to provide advice to the Conference of Parties for addressing loss and damage through risk management, insurance and rehabilitation.

The adaptation committee should be composed of representatives from all Parties, covering all regions and sub-regions and groups. There should be higher representation from developing countries; developing countries shall constitute at least two thirds of the committee, as most of the adaptation needs are in developing countries. The committee could also use the participation of experts from the industry and civil society. The committee should have good interaction with national and regional agencies that address adaptation needs in developing countries. It should establish a clear work programme and report back to the COP annually on progress under the different elements of the work programme.

ADAPTATION: ELEMENTS TO BE INCLUDED IN THE WORK PROGRAMME

Reference from the Cancun Agreement

28. *Invites* Parties and relevant organizations to submit to the secretariat, by 21 February 2011, views and information on what elements should be included in the work programme, including the following:

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;

(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification;
(c) Approaches for addressing rehabilitation measures associated with slow onset events;
(d) Engagement of stakeholders with relevant specialized expertise;

Views from Saudi Arabia

Saudi Arabia believes that the economic diversification sub-theme addressed within any new work program should provide tangible results to promote economic diversification. It should direct the appropriate subsidiary body under the convention to undertake specific actions. In addition, these specified actions can be overseen by the adaptation committee.

SBI should coordinate, support and follow implementation of actions to:

- Promote economic diversification and provide assistance for developing countries to achieve economic diversification to build resilience against climate change and the impact of response measures.
- Provide support for through foreign direct investment aimed at diversifying economic structure in developing countries; as well as assistance in creating favorable environment to attract such investments.
- Strengthening and improving technology transfer to support economic diversification efforts in developing countries.

SBSTA should coordinate with the scientific research community to:

- Promote understanding and the development and dissemination of measures, methodologies and tools for economic diversification aimed at increasing economic resilience and reducing reliance on vulnerable economic sectors, especially for relevant categories of countries listed in Article 4, paragraph 8, of the Convention;
- Improve the quality of models, in particular those that assess the adverse impacts on social and economic development as consequence of the responses to climate change, taken into full account the legitimate priority needs of developing countries with specific emphasis on countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products.

Saudi Arabia also would like to emphasize that the further activities under Nairobi Work Programme that have not been implemented should also consider the following elements:

1. Provision of support for the integration of economic diversification into sustainable development strategies;

2. Exchange of experience in economic diversification and lessons learned, with a view to identifying what technical assistance may be needed to develop structural and institutional capacity and/or to establish a mechanism for facilitating efforts to achieve economic diversification;
3. Coordination by the secretariat with relevant international organizations and the private sector in developed countries on matters relating to economic diversification;
4. Capacity building, at the national level, in the areas of economic diversification
5. Promoting Private-public partnerships in various areas to support economic diversification;
6. Providing recommendations to encourage direct investment and technology transfer from developed countries to assist in the economic diversification of developing countries listed in article 4.8 of the Convention;
7. Addressing the extent to which trade and export barriers affect economic diversification in Parties addressed under article 4.8 of the Convention.

Saudi Arabia believes that economic adaptation to the adverse impacts on social and economic development as a consequence of the responses to climate change, should take fully into account the legitimate priority needs of developing countries with specific emphasis on countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products as a crucial contribution segment of sustainable development. This is to build resilience of these economies against fluctuations in demand and pricing.

The work program should be overseen by the adaptation committee and include oversight of an international mechanism to address social, economic and environmental loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change and/or to the impact of the implementation of response measures. The functions of this international mechanism shall include engaging stakeholders with the specialist expertise required to provide advice to the Conference of Parties for addressing loss and damage through risk management, insurance and rehabilitation.

Paper no. 17: Sri Lanka

Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention (AWG-LCA)

As a highly vulnerable country to the impacts of Climate Change, Sri Lanka needs appropriate insurance mechanism to compensate the loss and damage due to extreme weather events such as droughts and floods, and adapting to the impacts of climate change. Therefore, risk transfer/insurance mechanism is financial contribution is necessary to strengthen this mechanism.

Paper no. 18: Switzerland

Views and information on elements to be included in the work programme on loss and damage

AWG-LCA 14

Switzerland welcomes this opportunity to share views and information on what elements should be included in the work programme to address loss and damage associated with climate change impacts as stated in the Draft decision -/CP.16 “Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention”.
Switzerland believes that addressing loss and damage is an important component of a comprehensive Adaptation Framework as decided in Cancún.

Objective

The Conference of Parties decided at COP16 in Cancún to establish a work programme in order to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change. The SBI is requested to agree on activities to be undertaken under such a work programme. The SBI shall be able to make recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session (December 2012).
Thus, the principle objective of the work programme on loss and damage is to provide a framework to deepen knowledge on this topic and therewith to create a basis for sound recommendations to the COP 18.
Due to the limited timeframe until COP 18 the SBI should agree on activities of the work programme at its thirty-fourth session in June 2011. This would give sufficient time to enrole the activities of the work programme before SB36 (June 2012) and, thus, give time (from SB36 onwards) to Parties to formulate recommendations and prepare for a decision at COP 18. As the work programme is limited in scope and time, it will be necessary to focus on elements that are crucial for preparing recommendations to the COP.

Proposed structure of the work programme

Switzerland proposes to structure the work programme in three work streams. The three work streams shall address the main elements of loss and damage contained in Draft Decision -/CP.16. These work streams shall be complementary and independent from discussions or outputs in other work streams.

- **Work stream 1: Enhance understanding** on loss and damage associated with climate change impacts.
  Work stream 1 reflects the need to strengthen international cooperation and expertise to understand loss and damage.

- **Work stream 2:** Exchange and deepen knowledge on **ways to reduce loss and damage**
  Work stream 2 reflects the need to strengthen international cooperation and expertise to reduce loss and damage. It covers the main elements of a comprehensive risk management approach, including risk assessment, risk reduction and risk transfer.
- **Work stream 3**: Exchange and deepen knowledge on **residual risks**
  Work stream 3 reflects the need to strengthen international cooperation and expertise on impacts related to slow onset events and on approaches for addressing rehabilitation measures.

Principles to be considered in all work streams

The work programme as a whole shall be guided by the following principles:

- **Aim for convergence of Climate Change Adaptation and Disaster Risk Reduction**: The Work Programme shall take into consideration the Hyogo Framework for Action and catalyse synergies between both fields of action.
- **Involvement of various actors**: All stakeholders with relevant expertise in addressing loss and damage shall be engaged in the proposed activities. These include, e.g. actors in DRR, development cooperation, humanitarian aid and the private sector.
- The Work Programme shall **build on existing experience and expertise and upcoming events and reports**: e.g. studies and workshops held under the Nairobi Work Programme, UNFCCC technical papers, UNISDR (especially the Global Assessment Report on Disaster Risk Reduction), the workshop to identify challenges and gaps in the implementation of risk management approaches to the adverse effects of climate change (as decided in FCCC/SBI/2010/L.34/Rev.1, para 5), the IPCC Special Report on Extreme Events, and experts etc.

Modalities

Switzerland proposes to have a similar process in all of the proposed work streams. Activities may start with one or two workshops on specific topics (refer to Table 1). Depending on the knowledge base in each work stream, the starting point may be a stocktaking workshop / expert workshop or a workshop with broader involvement of different stakeholders. The outcome of these initial workshops may be summarized in a workshop report and be made available to all Parties by the secretariat. In order to assure continuity of the process, the workshops may be followed by informal meetings, meetings with delegates or by further discussions in specific task groups, depending on the needs of the Parties and the progress achieved in the initial workshops.

The work programme may also have the flexibility to incorporate additional activities at a later stage, depending on the needs of Parties, particularly those formulated in the report of the SBI-workshop "to identify challenges and gaps in the implementation of risk management approaches to the adverse effects of climate change", that has been agreed in SBI Decision FCCC/SBI/2010/L.34/Rev.1, and the ongoing processes beyond this work programme. Such additional activities may be decided upon at SBI35 (December 2011).

Possible topics and activities

Switzerland proposes the following topics and concrete activities to be included in the work programme (Table 1):

Proposed Work streams	Proposed topics	Proposed activities
1. **Enhance understanding** on loss & damage associated with climate change impacts	Estimations and according methodologies for climate change induced loss and damage	Workshop / expert meeting on existing estimations and methodologies for quantifying climate change induced loss and damage and the way forward (such a workshop should be held after the publication of the IPCC SREX)
	Other topics may be introduced	
2. Exchange and deepen knowledge on **ways to reduce** loss and damage	*[Placeholder for needs identified in SBI workshop on risk management, to be decided upon at SBI35]*	1 or 2 workshop on approaches and possibilities to overcome barriers in the implementation of risk management approach (responding to the SBI workshop on challenges & gaps in implementation of risk management), with focus on e.g. risk management cycle as a whole, risk assessment, cost and benefit analysis
	[Placeholder for needs identified in SBI workshop on risk management, to be decided upon at SBI35]	
	Insurance solutions, including reflections on a climate risk insurance facility	Workshop on existing climate insurance facilities, their institutional set-up and elements to be further considered
	Other topics may be introduced	
3. Exchange and deepen knowledge on **residual risks**	Approaches for addressing rehabilitation measures associated with slow onset events	Workshop / expert meeting on existing approaches for addressing residual risks and the way forward
	Other topics may be introduced	

Table 1 Proposed work streams, topics and activities.

1. Enhance understanding on loss and damage: In-depth research to quantify loss and damage associated with climate change is still limited. Switzerland therefore proposes to first conduct a workshop at expert level to discuss e.g. definitions of loss and damage, current existing estimations on climate change induced loss and damage, and methodologies for quantification etc. This would allow a more in-depth discussion and identify common ground and differences between these estimations and methodologies. The Secretariat may be requested to prepare a stocktaking report as a basis for such a workshop. Experts / institutions to be involved may include the IPCC, insurance industry, academic institutions that have been involved in assessing costs of climate change. The workshop should be held after the publication of the IPCC Special Report on "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" (SREX).

2. Exchange and deepen knowledge on ways to reduce loss and damage: The following activities to address elements of a comprehensive risk management approach are proposed:

- Switzerland proposes to build on the workshop "to identify challenges and gaps in the implementation of risk management approaches to the adverse effects of climate change", that has been agreed in SBI Decision FCCC/SBI/2010/L.34/Rev.1.Linking the work programme with the SBI-workshop mentioned above would allow for follow-up consideration of responses to the identified challenges and gaps. Therefore, Switzerland proposes to foresee **one or two follow-up workshops within the work programme on loss and damage to discuss approaches and possibilities to overcome identified barriers** and the potential role of the Convention in this regard. These follow-up workshops may address e.g. the following elements: explore possibilities to strengthen the implementation of approaches and tools for identification and quantification of risks; explore possibilities to enhance data collection and public access to climate data and risk projections; explore possibilities to strengthen the implementation of cost and benefit assessments of adaptation options.
  Independently from the concrete elements, bringing in the practical expertise of the disaster risk reduction community in risk management and fostering synergies between Climate Change Adaptation and DRR could clearly benefit the process.
- **Workshop on existing climate insurance facilities:** Based on experience with regional / global insurance facilities, the workshop would allow to discuss their potential and limitations and to analyse the main common elements, their institutional set up and the role of the partners involved as well as the role of the Convention in this regard. A broad range of actors may be involved, e.g. insurance experts from private and public sector (e.g. UNDP, GFDRR, UNEP Finance, WB, and regional insurance facilities), experts in funding architecture and Party delegates.

3. Exchange and deepen knowledge on residual risks: The knowledge base to address residual risks is still limited. Switzerland therefore proposes to first conduct a workshop at expert level to discuss the range of instruments, approaches and alternative solutions to estimate and deal with residual risks as well as the role of the Convention and / or other institutional arrangements. This would be the case when expected losses could not be averted through adaptation / risk transfer measures and relief and rehabilitation responses will need to be included in the package of measures. The work stream will have close links with work stream 2 on risk management. The Secretariat may be requested to prepare a stocktaking report as a basis for such a workshop. Experts from different fields may be involved, e.g. from the insurance industry, the humanitarian aid, emergency aid.

Paper no. 19: Turkey

SUBMISSION FROM TURKEY ON ADAPTATION

Work Programme for Loss and Damage

- Risk transfer systems should be established to eliminate the agricultural risks which are encountered by the state and the producers. Within these systems, called Agriculture Insurance, to provide the sustainable guarantee of the plants, crops, greenhouses, agricultural equipment and livestock should be targeted at.

- A proper planning on insurance system should be made since the higher rates of agricultural risks would bring about an increase in the costs. Therefore, taking the financial resources into consideration, a research concerning the subvention of the insurance should be carried out by the experts of the agricultural sector.

- Defining what the 'vulnerability' is for itself, every country should prepare an action plan for the loss and damages which directly threaten the food safety and security as a result of the land degradation, forest degradation and desertification that are especially caused by the extreme and unexpected climatic events.

Paper no. 20: United States of America

Submission by the United States of America
Work program on loss and damage associated with the adverse effects of climate change
25 February, 2011

The United States welcomes the opportunity to provide a submission, pursuant to paragraph 28 of the Cancun agreements, on our views about what elements should be included in the work program on loss and damage associated with the adverse effects of climate change. Pursuant to paragraph 29 of the Cancun agreements, the submission is for consideration of the Subsidiary Body for Implementation at its thirty-fourth session, with a view to making recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session. Our comments aim to offer ideas on the work program to take place over the next two years.

The United States recognizes the importance of further discussion and learning on ways to encourage and facilitate the development of a suite of risk management tools—at the local, national, and regional levels. It is essential for this work program to acknowledge the significant opportunities to anticipate and *avert* loss and damage through risk reduction measures, in addition to recognizing the need to effectively deal with the residual risks through market-based insurance products and other tools. Furthermore, these approaches need to be purposefully linked, as economic signals (such as varying insurance premium rates) can draw attention to risks and motivate actions to avoid or reduce them.

Objectives

Recognizing that there is a growing knowledge base on climate risk management and insurance applications, the work program should endeavor to make this information more widely accessible and actionable, fill remaining gaps, and increase public-private exchange and collaboration.

In particular, the work program should help countries to:

- Target the various approaches – including risk reduction and risk transfer – to those climate risks that each can most appropriately and most cost-effectively address;
- Identify foundational requirements for the establishment of risk transfer programs in a given country or region (including regulatory frameworks, data, and capacity needs); and
- Make decisions on how to allocate limited public funds among a range of risk reduction and risk transfer approaches, and increase collaboration with the private sector, in order to achieve effective and comprehensive risk management.

Elements

In Cancun, the Parties established a work program to consider approaches to address loss and damage. They also invited comments on what elements should be included in the work program, including four potential elements:

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;
(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification;
(c) Approaches for addressing rehabilitation measures associated with slow onset events; and
(d) Engagement of stakeholders with relevant specialized expertise.

The United States submission responds to each of these four elements. The United States places priority emphasis on element (b), which studies the effectiveness and applicability of tools for risk reduction, risk transfer, and resilience building. We propose that the work program address two topics, described under element (b) below, in two workshops or expert meetings.

Countries' needs will be best met by flexibility that allows tailored approaches on the sub-national, national or regional level. Countries should be able to drive their own adaptation agendas, identifying the optimal allocation of a limited amount of public financing for adaptation between both risk reduction and risk transfer options. According to the World Bank and the U.S. Geological Survey, one dollar invested in disaster risk reduction can save an estimated seven dollars in disaster-related economic costs. Proactive risk reduction can avert loss and damage, whereas risk transfer can help fund recovery after the losses have already been realized; countries and communities need to understand the costs, benefits, and limitations of each approach, and be able to make decisions about their preferences.

This work program should support flexibility and country-driven adaptation actions by making accessible information and capacity building to countries that want to pursue approaches such as risk reduction, micro-insurance, and macro-insurance. Under element (b) below, we elaborate on how the work program can achieve this.

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;

The United States has serious concerns about the development of a global climate risk insurance facility. We believe that, before making operational decisions, there is a need for further analysis on the most efficient and effective ways to support adaptation. Furthermore, there are significant differences between countries in terms of anticipated climate change impacts, characteristics of national insurance regulations, readiness and existing capacity, making a one-size-fits-all approach technically unsound.

A global facility could inhibit a country-driven approach to adaptation by presuming that all vulnerable countries want a significant portion of adaptation resources to be set aside for later use, rather than invested in urgent implementation of actions. Given limited public resources, the decision to lock away limited public resources in an insurance pool implies that fewer funds will be available for adaptation measures that can actually avert or reduce damages. There is also evidence that premiums subsidized by donors, in addition to crowding out private insurance providers, can actually impede climate change adaptation by eliminating the motivation to reduce one's own risks (increasing moral hazard).

Instead, governments interested in insurance can draw on actuarial, financial, and climate modeling expertise to begin pooling risks through tailored products at the national and regional levels that respond to local realities.[1] National and regional schemes with appropriate private sector participation are also likely to be more nimble and capable of rapid response than a global insurance facility under the UNFCCC. Eventually, some of these regional schemes could partner in an even larger risk pool, with an eye to efficiency and cost savings; this kind of bottom-up approach will ensure that strategies are still country-driven and grounded in local contexts.

The UNFCCC can play an important role in supporting these bottom up actions by catalyzing international coordination to improve access of countries to information and knowledge, including through expert meetings, development of tools, and synthesis of lessons learned, and to strengthen the ability of countries to target various approaches, lay the foundations required for establishing risk transfer programs, and make decisions on how to allocate limited public funds among a range of risk reduction and transfer approaches.

(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification;

The work program should prioritize exploration of appropriate options for effectively and efficiently managing different kinds of climate-related risks.

At the local, national, and regional levels, adaptation efforts will be enhanced by the informed, targeted application of a suite of risk management approaches, from risk reduction to risk transfer and risk sharing. There is a great deal that this work program can do to provide information and access to expertise that will facilitate planning, prioritization, support for, and implementation of such approaches. The work program should also target local and national governments, financial institutions, development practitioners, and others involved in on-the-ground planning and implementation. It should provide negotiators with the technical background needed to be able to provide recommendations to the Conference of the Parties.

We propose that the work program address the following two broad topics in two workshops or expert meetings. These topics are arranged sequentially in order to ensure that a discussion of specific tools like micro- and macro-insurance, and support for implementation, builds on an adequate foundation of knowledge on the economics and complementarity of the different approaches.

[1] Governments and NGOs have been able to bring in financial and private sector expertise to develop technically sound micro-, meso- and macro-insurance products at the local, national and regional levels. For example, the World Bank provided technical assistance to the Government of Mongolia for the development of index-based livestock insurance; Swiss Re has supported micro-insurance design in countries like Ethiopia and India; and the Caribbean Catastrophe Risk Insurance Facility has forged partnerships with several bodies of experts including universities, the Caribbean Institute for Meteorology and Hydrology, and the Caribbean Development Bank.

Topic 1: Understanding, targeting, and linking instruments for cost-effective risk management.

What risks are insurable? What risks are cost-effectively addressed through insurance, and which are best addressed through risk reduction measures? Tools like risk reduction measures and insurance need to be targeted appropriately. In many cases, risk reduction and preparedness can be the least-cost option; for the most extreme and infrequent events, however, insurance often makes more sense. This area of inquiry can benefit from the expertise of private insurers and financial sector experts, as well as analyses undertaken by the Economics of Climate Adaptation (ECA) Working Group[2], and pilots recently conducted in eight Caribbean countries by the Caribbean Catastrophe Risk Insurance Facility. The ECA study presents a fact-based risk management approach to understanding climate impacts and identifying cost-effective adaptation measures, including the appropriate targeting of risk transfer instruments. The World Bank and others have also published on these topics.

What can we learn from existing micro-insurance pilot projects? Over the past several years, a number of organizations have supported micro-insurance and other microfinance projects to help low-income smallholder farmers and other vulnerable communities cope with weather risks. Recently, their experiences have been compiled in several publications that seek to better understand the sustainability, scalability, and impact of micro-insurance. More impact evaluations are needed. But this work program can provide countries and donors with a valuable opportunity to review existing pilots and understand the potential—and the limitations—of micro-insurance, in order to inform their own risk management strategies.

What can we learn from existing macro-insurance schemes? Governments often need support in the wake of disasters to rebuild public infrastructure and restore services. Macro-insurance schemes to help governments deal with disaster risks already exist in the Caribbean, Turkey, and Mexico. The work program can look at these and other examples, including catastrophe bonds[3], to understand the necessary enabling conditions, and to gauge their replicability in other countries and regions. It will also be important to study what can be done to ensure that insurance payouts to a national government are channeled and spent in a way that benefits the poor and most vulnerable, especially in the absence of micro-insurance products that provide payouts directly to households.

How can incentives for risk reduction be embedded in financial products like insurance and credit? The effectiveness of risk management tools—from risk reduction to risk transfer—can be enhanced by taking advantage of the interplay among them. For example, insurance as a risk transfer tool by itself provides cash to help people or governments cope *after* a disaster strikes. It can also facilitate risk reduction *before* a disaster because banks are more likely to lend to people who are insured; people can then use the loans to buy the technology and inputs needed to pursue diversified, resilient livelihoods. Insurance can also incentivize adaptive behavior through price signals; for example, the insured will pay higher premiums if they have not first worked to reduce the risks they face. This requires pricing that is transparent, risk-based, and based on quality data

[2] The Economics of Climate Adaptation Working Group is a partnership between the Global Environment Facility, McKinsey & Company, Swiss Re, the Rockefeller Foundation, ClimateWorks Foundation, the European Commission, and Standard Chartered Bank.

[3] Catastrophe bonds transfer risk to investors rather than insurers.

and clear assumptions. A pilot in Ethiopia also allows people to pay insurance premiums through labor on risk reduction projects.[4] Credit provides another opportunity; for instance, lower interest rates could reward resilient infrastructure design or adherence to zoning and building codes. Taking advantage of these linkages means carefully designing a system of adaptation programs and financial products.

There is much to be learned about these design aspects, and how to pursue these opportunities in a way that maximizes affordability and effectiveness by keeping the monitoring burden and the administrative costs low. This work program can help fill that gap.

How can bonds be used to mobilize resources to reduce the risks associated with slow-onset events? In Australia, a new Coral Reef Bond, developed with Goldman Sachs, puts a $50 billion livelihood value (from tourism and fishing) on the Great Barrier Reef. The up-front money generated by the bond will allow the government to make investments that increase the resilience of the reef and protect against coral bleaching from rising sea temperatures. The work program can explore how this approach could be adjusted to work in other countries and regions, where the long-term vulnerability of shared natural resources or other assets can be reduced through nearer-term investments.

How do non-climate stresses amplify loss and damage, and how can this be minimized? We need to examine what can be done to reduce the risks associated with ongoing trends—such as urbanization, population growth, and coastal development—that increase exposure to the adverse effects of climate change. In anticipation of both extreme and slow onset events, public policies and planning should be designed to avoid putting additional assets at risk of loss or damage. The work program should also recognize the potential of livelihood diversification and inclusive economic growth to facilitate shifts away from the most vulnerable occupations and localities.

Topic 2: Informing implementation and support.

Under this topic, we would look more concretely at how the tools identified in the collective analysis undertaken in Topic 1 can be applied on the ground. These discussions would prepare governments and practitioners to choose and apply the appropriate tools in countries and regions that are vulnerable to the adverse impacts of climate change.

How can risk management approaches be matched to national contexts and specific vulnerabilities? This discussion will help countries identify the risk reduction and risk transfer approaches that would be appropriate given the risks they face, and design policies to address non-climate stresses that threaten to exacerbate loss and damage. It will help governments, NGOs, and other actors consider the best interventions at both the national and local levels. It could include the development of risk analysis and decision-making tools, as well as the opportunity to discuss with insurance and financial sector experts on the most appropriate tools for priority risks. It will also help identify areas where international coordination would be beneficial.

[4] The Horn of Africa Risk Transfer for Adaptation (HARITA) project involves Ethiopian farmers, Oxfam America, Swiss Re, the Relief Society of Tigray, Columbia University's International Research Institute for Climate and Society, Nyala Insurance, Dedebit and Credit Savings Institution, Ethiopian government agencies, and other organizations.

What can countries do to apply these approaches and attract private sector involvement? This sub-topic would help pinpoint barriers to implementation and private sector participation, including areas that require intervention from the national government. It would be helpful, for example, for the work program to support creation of a template that could be applied in various countries and regions to assess readiness for market-based insurance schemes, for those who decide that insurance is worth pursuing as part of their risk management strategy. This template would identify critical constraints in the areas of data, capacity, regulations, demand, and the insurability of priority risks. It can also help identify supporting investments that donors and others can make—in areas such as weather data collection and capacity building—that will directly contribute to adaptation in addition to facilitating the development of risk transfer mechanisms by reducing barriers to private sector entry.

(c) Approaches for addressing rehabilitation measures associated with slow onset events;

Slow onset events are a serious concern. There are a number of slow onset events for which policies can be designed to reduce risks. We propose that the work program focus first on these types of slow-onset events. For example, some of the impacts of droughts can be mitigated through effective water management, crop and livelihood diversification, watershed restoration, and early warning systems. There are also a number of micro-insurance schemes that are specifically designed to help farmers cope with drought risk. In this regard, both slow onset and rapid onset events should be considered in the discussion proposed under Topic 1 of element (b) above, on the appropriate targeting of a suite of risk management tools.

It will be important to make the best possible use of limited funds today to reduce the severity of anticipated impacts from slow-onset events. Communities will be better off with protected assets and stable, resilient livelihoods, than with humanitarian aid or insurance payouts once their homes and livelihoods have been destroyed. We should also prioritize the development of strategies that leverage private sector resources and create market-based mechanisms that are not overly reliant on public sector budgets, and that are sustainable in the long term.

As further detailed in Topic 1 of element (b) above, the work program could also bring together financial sector experts to explore innovative ways to address slow onset events like sea level rise, which are not insurable due to a high probability of occurrence and long time frames; one potential approach is to use bonds. In addition, the work program should explore policy and planning options to deal with trends such as urbanization and coastal development that may increase the economic costs of slow-onset events associated with climate change.

(d) Engagement of stakeholders with relevant specialized expertise.

For all of the topic areas proposed above, it will be critical to engage relevant experts. These include insurers and other private sector representatives, disaster risk reduction specialists, and academics and non-governmental organizations involved in research and pilots around the world. The work program can invite submissions on the key questions proposed above under Topics 1 and 2. It can also commission reports and ask relevant experts to participate on panels at the expert meetings and workshops proposed in this submission.

It will also be important to consult with the intended beneficiaries, in order to target the work program at the most pressing questions, and facilitate the development of effective risk management systems that make a real impact on vulnerability. When reviewing existing micro- and macro-insurance schemes, for example, the work program can request that some insured individuals and governments share their perceptions of specific products and how well these tools have helped to reduce their vulnerability. Consulting with intended beneficiaries will be particularly important under Topic 2 (Informing implementation and support). The work program should consider beneficiaries' perceived risks, existing coping mechanisms, demand for products like micro- or macro-insurance, and need for training on topics like risk reduction and financial literacy.

A significant amount of program implementation will ultimately happen at the national and local levels, with the participation of governments, NGOs, and private sector companies; the work program should encourage the use of demand studies and stakeholder consultations to ensure broad buy-in and maximize desired impact. Furthermore, as insurers develop risk models for these new locations, there will be opportunities for coordinated public-private efforts to develop data sources and risk models, and a need for transparency in pricing. Transparency can help increase uptake of insurance products by engendering trust, and will also increase awareness of the climate risks present in these communities.

Paper no. 21: Uzbekistan

View and Information of the Republic of Uzbekistan on the inclusion into work program the issues of the loss and damages from climate risks

The Republic of Uzbekistan supports the initiatives of the Secretariat on activization of activities on adaptation addressed to reduce the losses and damages from climate risks.

Uzbekistan considers important to adopt the program of work aimed to developing approaches to solving problems related to loss and damage as a result of climate change impacts in developing countries, which are especially vulnerable to the adverse effects of climate change include:

- Develop the capacity of a climate risk insurance facility associated with severe weather events;
- Options for risk management and risk reduction, risk sharing and transfer mechanisms such as insurance, including options for micro-insurance;
- Approaches for addressing rehabilitation measures associated with slow outset events.

In Uzbekistan, one of the key elements of a national defense, particularly against weather risks, acts developing insurance system based on technology risk management.

For the last 5-6 years the insurance market of Uzbekistan is dynamic developing due to rapidly developing an active public policy. This is particularly true of agricultural insurance, where insurance risks are damage to or destruction of crops, animals and equipment as a result of natural disasters: hail, showers, storms, hurricane, frost, snow, frost, water shortage, floods, and others.

At the conditions of climate change, when increasing frequency and increasing extreme weather events, it is necessary:

• to develop and clearly define the criteria for adverse or hazardous values for this type of activity;
• to mark out into separate class of "insurance against hazardous weather events" for a reliable assessment of damage from weather risks in the insurance system;
• to promote best experience and practices to increase the level of infrastructure development of the insurance market;
• to manage the exchange of the experiences on the development of priority types of insurance;
• to identify ways to improve the professional level of employees of insurance companies;
• to identify the mechanisms available to invest in the insurance industry.

Paper no. 22: Venezuela (Bolivarian Republic of)

A. PROPOSALS ON ADAPTATION

Regarding proposals on elements to be included in the work programme on losses and damages including the possible development of a Risk Insurance Facility and options for Risk Management

1.- A Risk Insurance Fund shall cover damages and losses caused by the adverse effects of climate change and all the associated risks. It is appropriate to create specific spaces to encourage further discussion of specialists in the area on ways to implement a measure of this magnitude and associated costs.

A Risk Insurance Fund should have sufficient contributions from developed countries, according to its obligations and commitments under the framework of the Convention, so that developing countries, as a first example, could be able to finance insurance coverage for agricultural production units faced by disasters caused by extreme weather events that affect food security.

All strategies to implement rehabilitation measures should respond to the peculiarities of each country and priority areas identify by them. Such actions must be implemented by specific instances of the Convention with expertise in pursuit of capacity building associated with slow-onset events.

The Insurance Fund shall provide funding for capacity building activities through workshops and exchange of knowledge and experience.

2.- Opportunities to strengthen HEALTH at the COP 16 Agreements.

- In accordance with paragraph 21: "Invites Parties to submit to the secretariat views on the composition of, and modalities and procedures for, the Adaptation Committee, including on proposed linkages with other relevant institutional arrangements";

VENEZUELA proposes the inclusion of health expertise within the Adaptation Committee.

- In accordance with paragraph 28: "Invites Parties and relevant organizations to submit to the secretariat, views and information on what elements should be included in the work programme, including the following:...";
VENEZUELA proposes the inclusion of health as an important element (being part of the three main sets of adverse effects that the UNFCCC seeks to avoid), and also proposes engagement with national and international health organizations to ensure a relevant specialized expertise.

Paper no. 23: Food and Agriculture Organization of the United Nations

Food and Agriculture Organization of the United Nations

A submission to UNFCCC Secretariat on approaches to address losses and damages in agriculture, forestry and fisheries in answer to the invitation of article 28 of Decision FCCC/AWGLCA/2010/L.7

In response to the invitation of article 28 of Decision FCCC/AWGLCA/2010/L.7 for relevant organizations to submit to the secretariat, by 21 February 2011, views and information on what elements should be included in the work programme decided in article 26, the Food and Agriculture Organization of the United Nations herein submits information and views on approaches to address losses and damages in agriculture, forestry and fisheries.

Climate change has strong impacts on the agricultural sectors – agriculture, forestry and fisheries- by modifying or degrading productive capacities and by directly and indirectly increasing the risks associated with production. In fact, developing countries that are "particularly vulnerable to adverse effect of climate change" are in that situation often because of the importance of the agricultural sectors for their economy and for their food security. Climate change induced losses and damages in the agricultural sectors will be spread into the rest of the economy because of their importance to the livelihood, economic development and food security of the population in developing countries. Climate change induced losses and damages will affect each dimension of food security: availability (production), access, utilization (nutrition) and the stability of these factors. Therefore, and considering that the right to adequate food is a fundamental right, the work programme shall devote particular attention to approaches to address losses and damages in the agricultural sectors.

1) Impacts of climate change on the agricultural sectors

An increase in temperature and a change in precipitation patterns will directly affect crops' growth and development, need for water, soil fertility, performance and carrying capacity of livestock and feed supply, water supply for irrigation, prevalence of diseases and pests and occurrence of extreme weather events; and indirectly affect market prices, owing to the different regional effects of climate change. Fisheries and aquaculture production systems are likely to suffer from the sea-level rise, changes in current sea productivity patterns, flooding, and increase in frequency and intensity of storms and extreme weather events. Forests will also be sensitive to climate variations, extremes and long-term changes, such as changes in day, night and seasonal temperatures, storm frequencies and intensities, duration and intensities of heat waves, droughts and floods, incidence of pests and diseases, and frost, snow and ice cover.

Climate change will significantly increase the production risks that farmers, livestock-keepers, fishers and forest-dependent people face, particularly in regions that already suffer from chronic soil and water scarcity, high exposure to climatic extremes, including floods and droughts, and

poverty and hunger. Particularly communities in fragile environments, such as drylands, mountainous and coastal areas will be affected. The rising temperature will affect coral reefs, lessening their role in coastal protection, which in combination with rising sea levels and more frequent extreme weather events, becomes a direct threat to livelihoods and agricultural, forest and fisheries systems in coastal areas.

Production systems with low productivity and high variability in yields are chronically vulnerable leading to more stringent adaptation needs. These systems, even under present conditions, produce less, are less efficient and less resilient to shocks than they could be. In such systems, present risks resulting from climate variability and extreme events reinforce poverty and slow down development. Climate vulnerability, poverty and food insecurity are strongly interlinked.

2) Losses and damages in the agricultural sectors are not only measured in economic terms, but also affect food and nutrition security and jeopardize the right to food

Losses and damages in the agricultural sector have considerable impact on the whole economy of developing countries. First, because agriculture represents an important share of these economies, of the wealth produced and in terms of direct means of livelihoods; second, because agriculture is a strategic sector of the economy, the wealth of the other sectors depending of the health of the agricultural sectors. Therefore, preventing losses and damages in the agricultural sectors also prevents losses and damages in other areas of the economy.

Moreover, losses and damages in the agricultural sectors directly affect food security in its four dimensions of availability, accessibility, stability and utilization.

For this reason, The Committee on World Food Security, at its last session, requested the High Level Panel of Experts on food security and nutrition (HLPE) to “review existing assessments and initiatives on the effects of climate change on food security and nutrition, with a focus on the most affected and vulnerable regions and populations and the interface between climate change and agricultural productivity, including the challenges and opportunities of adaptation and mitigation policies and actions for food security and nutrition”.

The fact that damages and losses in the agricultural sectors translate not only in “pure” economic terms, but also affect food and nutrition security, and the right to food, makes prevention of such losses and damages, ex-ante adaptation, and preparedness, absolutely fundamental.

3) Views on elements that should be included in the work programme

(a) Possible development of a climate risk insurance

If a risk facility is created to address severe weather events it shall cover losses and damages in agriculture, forestry and fisheries, particularly those affecting productive capacities, especially considering the importance of these sectors in the economy of developing countries. Insurance

schemes specific to the agricultural sectors are also being developed. It is, however, necessary to examine the financial sustainability of such compensatory schemes in the context of increased probability of weather-induced adverse effects, and to explore the conditions and ways to enhance it, in particular through risk spreading on larger geographic areas and/ or with external subsidies, including the possible model of a disaster relief fund backed up and subsidized by developed countries and the reinsurance industry.

(b) Options for risk management and reduction

Climatic risks, whether extreme events or even unpredicted slight changes in temperature or precipitation patterns can cause considerable losses and damages. Agricultural sectors are also facing very diverse risks (economic, environmental, pests and diseases) all of which will be modified and can be exacerbated by climate change. A very slight climatic change can trigger a considerable extension, in geographical range, intensity, and frequency of a pest or disease which will, because of climate change, cause considerable losses and damages.

Losses and damages can affect both production and productive capacity and ecosystem functions. The work programme shall consider both categories of losses, in production and productive capacity, to propose appropriate measures to address them.

Any risk management strategy shall aim first to reduce exposure to risk, before palliating with the effects of risk through risk coping, i.e risk retention (risk is borne by the farmer, i.e. self-finance) and risk transfer (insurance) mechanisms.

It shall aim, above all, to reduce damages and losses through increasing resilience of the production systems including by promoting best practices in an ecosystem approach, the early detection of emerging risks, the subsequent reduction or elimination of a specific risk. It shall then help systems to recover, including by restoring productive capacities. In doing so, such strategies should combine specific policies targeted to address specific agents and categories of risks. They include measures to reduce or eliminate specific risks, such as plant pests and animal diseases, including advanced observation networks for quick response. Diversification can both increase the efficiency of systems and their resilience to direct and indirect risks. It also can spread risk, increasing economic resilience at farm and local level. Diversified rotations, including crop varieties and species with different thermal/temperature requirements, better water use efficiency and resistance to pest/disease, and lower yield variability are effective ways to reduce risks and increase efficiency. Other measures either prevent the loss of productive assets, such as feed banks for livestock during droughts, or enable quick recovery, such as availability of seeds.

The work program shall thus consider all the elements needed to establish and implement risk management strategies. These include, at local level, impact assessment and monitoring, vulnerability assessment, identification of (ex-ante) damage reduction measures including by early action and by building resilience at farm and system level. It shall also consider measures to ensure their implementation, including the establishment of institutions at national and regional level, capacity building and compensation for incurred costs, including investments and income

foregone during the transition period towards a more resilient system. It will also require supporting the development and dissemination of technologies and practices, as well as international cooperation for promoting the conservation and sustainable management of biodiversity, including ecosystem services to maintain and/or enhance ecosystem resilience; breeding of crops, trees, livestock and fish adapted to less predictable climate conditions; and enhancing in-situ and ex-situ conservation and sustainable use of genetic resources.

The efficiency of any specific risk management policy is largely dependent on the existence of enabling policies, institutions, coordination mechanisms, and basic infrastructures. All of these form a set of public goods that are particularly important to reduce risk exposure and improve early warning and preparedness.

The notion of insurance helps to better understand the incidence of risk at producers level. But it shall only be considered as an element of a risk management strategy. Insurance does not eliminate risk, it pools the risk to spread it across an industry or economy and through time. And it is only a tool to limit adverse financial effects of an event. Therefore its relevance and role in a risk management strategy would be different according to sectors and to the impacts they have to address. In fact, climate change could even reduce the range of use of insurance in the agricultural sectors. On the medium to long term the combination of slow onset change and the increased risk of adverse weather events or conditions will compromise the financial sustainability of insurance schemes. The work program shall examine the potential role of insurance taking into account these elements and explore ways to ensure financial sustainability of insurance schemes given an increased climatic risk.

(c) Approaches for addressing rehabilitation measures associated with slow onset events

Agriculture, forestry and fisheries are particularly vulnerable to slow onset events such as sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification.

These slow onset effects will change gradually the conditions of production. For instance changes in growing seasons will cause gradual shifts in areas suitable for cultivation of specific crops.

Some of these changes can be addressed, to a certain extent, either by adapting production systems or by rehabilitating degraded environments. Both will require, at local level, impact assessment and monitoring, vulnerability assessment, identification of (ex-ante) damage reduction measures. Adaptation and/or rehabilitation, to be implemented, will require capacity development and compensation for incurred costs, including investments and income foregone during the transition period towards an “adapted” or “rehabilitated” stage. It will also require supporting the development and dissemination of technologies and practices, as well as international cooperation for promoting the conservation and sustainable management of biodiversity, including ecosystem services to maintain and/or enhance ecosystem resilience, and breeding of crops, trees, livestock and fish adapted to changed climate conditions and enhancing in-situ and ex-situ conservation and sustainable use of genetic resources.

The work program shall also explore the means to compensate for loss of productive capacity caused by slow onset events.

(d) Engagement of stakeholders

Climate change will have in the agricultural sectors very different impacts depending on local conditions, food production systems and diets. The poor, women and indigenous people are particularly at risk. Therefore, implementation measures shall be designed locally in a participatory process including all stakeholders, smallholders, pastoralists, fishermen and forest-dependent people and other particularly vulnerable minorities and ensuring proper representation to women and indigenous people.

The work programme shall consider processes to that effect.

Paper no. 24: Inter-American Development Bank

Disaster Risk Management and long-term adaptation approach at the Inter-American Development Bank (IDB)
Synthesis Report
March 2011

Sergio Lacambra, Hori Tsuneki, Cassandra Rogers; *Disaster Risk Management Division (INE/RND)*; Guillermo Collinch, Juan Martinez; *Capital Markets and Financial Institutions (ICF/CMF)*; Alfred Grünwaldt, Korinna Von Teichmann; *Sustainable Energy and Climate Change Unit (INE/ECC)*

In an effort to enhance long-term adaptive capacity in its borrowing countries, IDB considers Disaster Risk Management (DRM) as the key element to address risks posed by climate variability and change. In this sense, IDB is committed to promote and facilitate systematic risk management practices in vulnerable countries throughout the LAC region using and/or creating new financial products. IDB's approach[1] to reduce present and future vulnerability to climate change includes the five main elements of an effective disaster management system, namely: (i) risk identification, (ii) emergency preparedness, (iii) governance, (iv) risk reduction (mitigation and prevention) and (v) financial protection.

To implement this approach, the IDB has a wide range of financial instruments that include disaster prevention technical co-operations (non reimbursable funds), investment loans, policy based loans, contingent credit facility and insurance facility. In addition to these ex ante financial instruments, the IDB has other ex post instruments to support its member countries to meet the needs of the affected population while reducing their vulnerability to future disasters during the emergency, rehabilitation and reconstruction phases.

(i) Risk Identification

Risk identification includes the analysis of current climate induced hazards and model-based projections by geographic location, as well as the frequency and intensity of their future occurrence. In addition, risk identification requires a thorough investigation on the socio-economic vulnerability of potentially exposed elements.

One of the activities IDB is currently supporting to contribute to risk identification in the Central American region (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panamá) is a project on regional-scale hurricane forecast (RSHF). In cooperation with the National Centre for Atmospheric Research (NCAR), high-resolution simulations are generated to predict hurricane genesis, their travel pathways and decay regions incorporating models of global climate patterns. The combination of the models used by NCAR allow for predictions on finer scales than ever before. These forecasts will find a practical application into the Central America Probabilistic Risk Assessment (CAPRA) project, which is an ongoing initiative to develop a GIS-based decision-support tool for understanding, visualizing and communicating disaster risk to decision makers at the local, national and regional levels. The RSHF project will initially analyze how specific hazards (e.g. hurricanes' intensity and frequency) could be influenced by long-term climate change. The results from this investigation will be complemented in the

[1] http://www.iadb.org/en/topics/natural-disasters/natural-disasters,1441.html

near future with additional studies aimed at developing comprehensive information on how to identify and address basal causes of vulnerability to climate change (e.g. sectoral indicators), as well as, validated methodologies to develop climate change vulnerability maps that can inform the decision making processes. (e.g. introduction of key information from vulnerability assessments within land and ecological plans at the watershed level).

(ii) Emergency Preparedness

Emergency preparedness requires action to support communities in reducing the effects of a predicted adverse event to the largest extent possible. In this respect, IDB has been investing in the LAC region during the last decades in a wide group of projects aimed at improving countries capacities to better prepare to an eventual emergency. Some examples include community based early warning systems in Eastern Caribbean countries, Guyana and Ecuador, disaster risk local awareness raising and support the global campaign on safe schools in the Dominican Republic. As this particular element of DRM has demonstrated to significantly contribute to reduce vulnerability to current climate variability, it will be the starting point towards long-term adaptation planning. In this regard, model-based information related to changes in specific hazard trends and generated through the risk identification process could inform the design and implementation of specific emergency preparedness action plans. The Bank will prioritize programs that give priority to a community based adaptation approach including safety nets, as a way of raising awareness and preparedness in communities.

(iii) Institutional Capacity Building and Governance

IDB has supported institutional and legal framework reform processes in Peru and Guatemala through two Policy Based Loans (PBL). These loans have initiated the institutional changes and capacity developments necessary for an integrated approach to both subjects. In the case of Peru, the loan has led to the approval of a new legal framework for disaster risk management and has encouraged the integration of climate change considerations in the national system of public investment.

The IDB is currently preparing two additional Policy Based Loans (PBL) in Colombia and Panamá to enhance the integration of national disaster risk management and climate change adaptation strategies.

(iv) Risk Reduction (Mitigation and Prevention)

Risk reduction involves activities to reduce the vulnerability to specific hazards. IDB will continue its current lending program in LAC, giving priority to those areas with a higher vulnerability (e.g. the Caribbean, Central America and others). In particular and to the extension technology allows it, the design of risk mitigation actions will be informed by future climate trends presented by climate-system models and vulnerability assessments in order to avoid the development of projects that increase a specific system's vulnerability and promote mal-adaptation. Examples include community based coastal zone management in Jamaica and Barbados, and mitigation works in river basins in Nicaragua, Honduras and Haiti.

(v) Financial protection (risk retention and transfer)

In order to bridge the integrative risk considerations (spanning from risk assessment, mitigation, institution building, emergency preparedness and risk financing to relief operations, recovery processes and

reconstruction) with committed post-disaster funds the Bank developed an innovative operational strategy, namely, the Natural Disaster Risk Management and Finance Approach. This approach proposes an integrated, both institutional and financial strategy, to all the different phases of the natural disaster management cycle. The most important advance is that it provides finance that bridges ex-ante and ex-post activities in a way that help preventing deep economic downturn after a severe or catastrophic disaster. In addition, it emphasizes the need for financial management of multi-country hazards and risks, and their potential intensification through climate change, promoting regional insurance pools, enabling the possibility of taking advantage of risk diversification efficiencies across the region and a greater access to the international reinsurance markets.

International Labour Office (ILO)

21 February 2011

International Labour Office[1] submission to the UNFCC on the Cancun Adaptation Framework on Enhanced Action and Adaptation[2] with specific reference to article 28:

> ***"Invites parties and relevant organizations to submit to the Secretariat by 21 Feb 2011 views and information of what should be included in the work programme[3]"***

A. The World of Work and Climate Change Adaptation

Climate change is becoming an increasingly important driver for change of the world of work, in particular in those countries more vulnerable to climate change. Globalization, social crisis such as food insecurity or lack of social protection, the recent economic and financial crisis as well as changes in technology and changes in global demographics currently are important drivers for change in the world of work. The focus of much of the ILO's recent work has related to enabling a fair and just adaptation of the world of work to these changes. The effects of climate change , on most occasions exacerbate the negative effects of all these factors. The ILO has approached these changes in the world of work from the framework of its Decent Work Agenda and increasingly recognizes that a lot of the expertise and experience gained in preparing for and engaging with changes in the world of work are also relevant to changes driven by climate change.

The loss and damage caused by climate change relating to employment and livelihoods are becoming increasingly evident. In developing countries in particular they tend to amplify the negative impacts of the other drivers for change on employment and livelihoods. At the same time it is well understood that the deterioration of employment and livelihoods has severe social consequences. The ILO proposes therefore that the Adaptation Committee's work programme carefully considers the **income security** and the **employment** dimensions and consequences of the adverse impacts of climate change and climate variability, as well as of climate adaptation policies. In particular striving for **Decent Work** and a "**just transition**" to a sustainable world of work transformed by climate change and other concurrent drivers for change should be a priority in the view of the ILO.

---

[1] The International Labour Office is the permanent secretariat of the International Labour Organization which is responsible for drawing up and overseeing international labour standards. It is the only 'tripartite' United Nations agency that brings together representatives of governments, employers and workers to jointly shape policies and programmes.

[2] CoP 16 Decision: Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention, Cop 16.

[3] Work programme referred in Article 26: "Decides to hereby establish a work programme in order to consider, including through workshops and expert meetings, as appropriate, approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change".

Decent Work and "Just Transition" in the context of adaptation should aim at creating the conditions that will ensure that those whose livelihoods, income and employment are affected by the adverse impacts of climate change and climate variability are supported in a transition to other livelihoods, income and employment. This support needs to take place in a framework that includes a fair distribution of costs, representation and employee involvement; long-term planning; security against direct losses. In addition, there is a need to maximize the socio-economic impacts of the climate adaptation policies and measures taken globally at the national and local level.

The need for a just transition and decent work are captured in Article 10[4] of the CoP 16 Decision and it is on this basis that the ILO recommends that the following is incorporated into the work programme of the Adaptation Committee:

- Assessments of the impacts of climate change need to place specific emphasis on the risks of; disrupted livelihoods and labour markets, higher unemployment and more precarious and informal work, identification of those who will be most affected by these changes, and how these effects translate into negative social outcomes

- The definition of universal indicators to measure the socio-economic impacts of climate change adaptation policies and measures

- Social Dialogue[5] and participation of relevant stakeholders- in particular workers, employers, and other members of civil society- in the design of climate adaptation policies, and the planning and implementation of adaptation actions, is important as it leads to better, and more widely supported policies and measures;

- "Soft Adaptation" options that build the capacities of individuals, businesses, communities and societies to adapt to climate change, such as investing in social protection and income security, support with diversification of local economies to create climate resilient jobs and sustainable and resilient enterprises, skills development and creating more responsive and adequately designed labour market institutions should be a clear pillar of any national adaptation plan;

- Social and employment gains of climate adaptation policies and measures should be an objective and should be maximized. This can be done by giving due consideration to, contributing to local economic development through providing SME with measures for diversification and offering more

[4] Article 10 of the COP 16 Decision states:. *Realizes* that addressing climate change requires a paradigm shift towards building a low-carbon society that offers substantial opportunities and ensures continued high growth and sustainable development, based on innovative technologies and more sustainable production and consumption and lifestyles, while ensuring a *just transition* of the workforce that creates *decent work* and quality jobs;

[5] Social dialogue is defined by the ILO to include all types of negotiation, consultation or simply exchange of information between, or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy. (See: http://www.ilo.org/public/english/dialogue/themes/sd.htm)

labour-intensive works through local resources based approaches balanced with the choice of appropriate technology;

- Adaptation approaches should build local capacities and institutions to enable harnessing local knowledge, in particular with regards to the local environment and the priorities of those most affected, and to enable rapid local responses that do not depend on centralized decision-making and approval.

- For adaptation approaches and measures to be sustainable in the long term, they need to advance climate resilience - not only in environmental terms - but also in social and economic terms, and should therefore promote development based on and generating green jobs[6].

Together these approaches can support a process of adaptation to climate change that does not exacerbate or amplify current trends of growing inequality, higher unemployment and declining job quality, but rather contributes to improving the quantity and quality of jobs and thus more climate resilient societies and labour markets. These approaches are also consistent with the overall approach of the UN system as captured in the document *"Advancing work on adaptation to climate change, A UN system perspective[7]"***.**

Article 28.b: Options for Risk Management and Reduction; risk sharing and risk transfer mechanisms such as insurance including options for micro-insurance, and resilience building including through economic diversification

The AC should include further developing **microinsurance**, in particular crop and livestock insurance for small farmers in order to improve mechanisms for understanding risks and enabling wider coverage. The ILO's "Microinsurance Innovation Facility[8]" is currently testing different approaches in various countries vulnerable to climate change and is making major contribution to this emerging field of work. In addition the ILO is also testing other financial innovations that will enable vulnerable households to improve their risk management strategies.

Social security, including basic social protection is a well established mechanism for risk sharing with regards to loss of income and its strengthening should be an integral part of adaptation measures. This aligns with the need of most developing countries to strengthen their social protection schemes as is reflected in the UN Social Protection Floor Initiative that promotes universal access to essential social transfers and services. Social protection can be enhanced through mechanisms such as public works programmes and employment guarantees and cash transfer, as these can be effective in rural and low-income areas that are most vulnerable to climate change.

[6] The ILO has defined Green Jobs as positions in agriculture, manufacturing, construction, installation, and maintenance, as well as scientific and technical, administrative, and service-related activities that contribute substantially to preserving or restoring environmental quality while at the same time meeting the standards of Decent Work. See also: *www.**ilo**.org/**greenjobs***

[7] UN CEB as an input to the COP 15, See: http://unfccc.int/resource/docs/2008/awglca4/eng/inf02.pdf

[8] See: http://www.ilo.org/public/english/employment/mifacility/

A strong focus on **local economic development (LED)**[9] is an important mechanism for supporting the process of economic diversification as it shifts the focus to the local needs and opportunities rather than concentrating on sectoral ones. Diversification is a key strategy for all economic sectors including small farmers, and micro, small and informal enterprises and in particular measures to support these enterprises with diversification warrants attention in the work programme of the AC.

Focusing on the businesses, communities and workers at the local level is critical for building the resilience of local economies as it tends to lead to a more diversified local economy and more opportunities for job creation. Because of its focus on the local area, it is also more in tune with locally available resources and the state of the local environment. LED as an approach promotes the diversification of household income options for vulnerable populations and ensures that their income and assets are not undermined by behaviours that increase their vulnerability to climate change impacts. Other elements of LED include supporting enterprises to consolidate their position in the formal or informal market, working with governments, employers' and workers' organizations on policies and programmes to facilitate finance for SMEs, as well as advice on tools and approaches for responsible restructuring of sectors, value chains and enterprises.

Adaptation approaches and measures need to be sustainable in the long term. In order to achieve long term social and economic development – the best strategy to cope with climate change - emphasis needs to be placed on climate resilient poverty reduction (MDG 1). A major contribution to this achievement is enabling and generating green employment. An **employment intensive investment and local resource-based approach** applies a needs-based, inclusive and participatory approach using appropriate technology, often minimizing capital-intensive equipment and applying environmental friendly construction methods. Applied in local communities it helps them adapt to the effects of climate change, generate income, and create much needed jobs. These approaches can contribute to environmental and private / public infrastructure preservation and improvement, soil conservation, or offer social services – both in rural and low-income informal urban settlements – in and out of times of crisis. They can also provide support to local SME contractors, offer community contracting tools and build effective local organizations for the management of these programmes. Maximizing the use of local resources will also have significant multiplier effects on the economy, supporting local economic development.

"**Green Jobs**" are a key part of the diversification strategy. Such "Green Jobs" include changes in existing practices or new opportunities identified as part of LED or other adaptation measures.

The extensive experience of the cooperative movement is also making it increasingly clear that these enterprises have traits that can make them more resilient in the face of structural changes such as those brought on by climate change and from that perspective merit increased attention as an enterprise model to be promoted in areas vulnerable to climate change.

[9] See http://www.ilo.org/empent/Areasofwork/lang--en/WCMS_093862

Article 28.c: Approaches for addressing rehabilitation measures associated with slow-onset events (including sea level rise, increasing temperatures, ocean acidification, salinization, glacial retreat and related impacts, land and forest degradation, loss of biodiversity and desertification).

Experiences all over the world have demonstrated that large-scale public works programmes can combine provision of adaptation infrastructure, rehabilitation of natural resources[10], enhanced local employment and social protection, and high degrees of local participation. These programmes are an important option for prevention and rehabilitation measures related to slow-onset events. In times of crisis, they can also complement and fill the gap where the private sector is not able to and provide the much needed safety net to ensure just transition.

Large national programmes like the National Rural Employment Guarantee Scheme in India, the Productive Safety Net Programme in Ethiopia and the rehabilitation of the Loess plateau in China are current examples that demonstrate the ability of these approaches to operate at scale and rehabilitate degraded regions and thus restoring or protecting livelihoods while at the same time provide incomes, social protection and employment to those who most need them. These programmes all incorporate the use of labour-intensive methods of construction to maximize the employment and income effects targeting poorer and more vulnerable segments of the population.

The ILO has more than 30 years of experience working together with workers, employers and governments around the world in designing and planning of such programmes[11] and a wealth of technical guidelines and courses has been developed to enable the efficient construction of these types of infrastructure using labour-intensive methods.

Article 28.d: Engagement of stakeholders with specialized expertise

Workers and employers' organization as well as labour institutions, as the relevant actors of the world of work, should engage in adaptation to climate change-related decisions. In this regard, the ILO as the UN specialized agency dealing with employment and labour issues should also been involved.

[10] Relevant activities of these programmes include irrigation works, water and soil conservation, flood protection, roads and forestry

[11] Through its International Training Centre in Turin the ILO offers the "Innovations in Public Employment Programmes" that assist with building capacity on this

Paper no. 26: Secretariat of the Global Climate Observing System

The Global Climate Observing System (GCOS) Secretariat would like to submit its views with respect to the work programme proposed in Paragraph 26 of FCCC/AWGLCA/2010/L.7.

In order to assess losses and damages associated with climate change impacts in developing countries, it is extremely important that the Essential Climate Variables (ECVs) be systematically observed. A large number of the ECVs, especially in the terrestrial domain, are directly relevant for assessing losses and damages, while most of the other ECVs are at least indirectly relevant. Directly relevant ECVs include water use, river discharge, groundwater, lake levels, snow cover, glacier measurements, soil moisture, and land cover. Others, less obvious, are fraction of absorbed photosynthetically active radiation (FAPAR) and leaf area index, both of which are valuable measures of plant stress and crop yield, and thus of food security. Many of these ECVs are not monitored adequately in developing countries where vulnerability is typically greatest. The GCOS Steering Committee suggests that the UNFCCC Work Programme include an expert workshop to further develop the synergies between climate variables and adaptation and sustainable development, in particular, exploring the changes in scale needed to link climate observations with development goals.

Such a workshop would feed into, and inform development of, a larger initiative that GCOS hopes to be able to undertake beginning in 2012 to assess climate observing needs specifically for adaptation. This more substantial assessment would address data needs for studies of climate impacts and adaptation and for the provision of climate services, and it would support the needs of the UNFCCC. The GCOS Secretariat/Steering Committee would be willing to advise on the content of this workshop and/or host the meeting.

Paper no. 27: United Nations Development Programme

Losses and Damages submission UNDP

AWG-LCA/2010/L.7/26-29

26. Decides to hereby establish a work programme in order to consider, including through workshops and expert meetings, as appropriate, approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change;

27. Requests the Subsidiary Body for Implementation to agree on activities to be undertaken under the above-mentioned work programme;

28. Invites Parties and relevant organizations to submit to the secretariat, by 21 February 2011, views and information on what elements should be included in the work programme, including the following:

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;

(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification;

(c) Approaches for addressing rehabilitation measures associated with slow onset events;

(d) Engagement of stakeholders with relevant specialized expertise;

The Ad Hoc Working Group for Long-term Cooperative Action under the Convention (AWG-LCA), at its 13th session, invited Parties and relevant organizations to submit to the secretariat, by 21 February 2011, views and information on what elements should be included in a work programme under the Subsidiary Body of Implementation (SBI) intended to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to climate change as contained in paragraph 26-29 of the draft conclusions in FCCC/AWGLCA/2010/L.7. UNDP Barbados & the OECS, in support of AOSIS and the CARICOM task force on climate change and development, has previously drawn attention to loss and damage associated with climate change with the preparation of two studies: “an overview of modeling climate change: Impacts in the Caribbean Region with contribution from the Pacific Islands” and “Modeling the transformational impacts and costs of sea level rise in the Caribbean”. Reports from the studies were launched at COP-15 and COP-16 respectively. Accordingly, and in response to the invitation issued by the AWG-LCA, the United Nations Development Programme (UNDP) would like to further contribute to deliberations on these important issues, particularly for SIDS, by making the following submission.

The commitments made under the Copenhagen Accord are unlikely to reduce projected temperature increases to anything below 2 degrees. It is projected that such increases in land and sea temperature will lead to higher frequencies of extreme weather events, changes in precipitation patterns and coral bleaching. Changes in local climatic conditions are associated with loss of biodiversity and food security through decreased agricultural output. Many small islands are also a maximum of a few meters above sea level, and have a substantial proportion of their residential areas and infrastructure, including critical infrastructure, situated on the coast. The incremental loss and damage associated with climate change places a heavy burden on countries which are already heavily impacted by extreme weather events due to their economic and physical vulnerability. There is limited capacity to spread risk geographically, and small, largely single

sector economies leave little flexibility to address the changes associate with changing climatic conditions. The need for a strong and equitable mechanism to address economic costs of the loss and damage associated with climate change in vulnerable economies is therefore imperative.

An SBI work programme addressing loss and damage associate with climate change must be multi-focal in nature, emphasizing both available risk management tools and risk transfer mechanisms and the scientific evidence needed for quantification of loss and damage in developing countries. Furthermore, it should address both rapid onset events such as extreme weather situations and impacts associated with slow changes such as sea-level rise. Although the items listed in paragraph 28 a-d are important parts in the response to loss and damage and should be evaluated by the SBI work programme, these items should not be seen as a confined list of choices for response.

The work programme on loss and damage should be established as an ongoing programme cycle with a lifespan of a few years, addressing the following thematic areas: current knowledge on loss and damage; experience with various instruments to address loss and damage; and implementation pathways under the UNFCCC. Elements to be considered include micro- and meso level risks of loss and damage at the sub-national and national level, macro level risks of loss and damage at the country and regional level and longer term forseeable loss and damage.

The first thematic area, current knowledge on loss and damage, expansion and updating of current studies such as those commissioned by UNDP will be necessary. Greater focus on impacts from extreme weather events with associated risk assessments events is required, and so is a thorough mapping of assets exposed to loss and damage at a regional and country level to proceed with insurance.

The work towards the development of a climate risk insurance facility will be an important part of the work programme. From 1980-2003 insurance covered 4 % of total costs of climate-related disasters in developing countries compared with 40 % in high income countries. An insurance component would enable SIDS and other particularly vulnerable states to manage financial risk from increasingly frequent and severe weather events. Although initiatives such as the Caribbean Catastrophe Risk Insurance Facility are available to Caribbean countries, these do not specifically address climate change impacts. Furthermore, many developing countries either cannot access insurance or find it increasingly difficult to afford commercial insurance to address impacts on national economies.

The development of such an insurance facility must be supported by inclusion in the work programme of quantification of loss and damage caused by climate change. Methods of quantification may include identification of vulnerable areas or sectors, analysis of the threat regarding source, extent, timeframe, detailed (regional and local) modeling of the impacts of climate change, and even more important the damages in various localized sectors. Quantification should also include specific assessments of damage, as for instance loss of landmass, erosion, loss of biodiversity, with the application of both resource and traditional economics to translate these damages to monetary losses.

To achieve implementation of the SBI work programme and a climate risk insurance facility under the convention, institutional development and capacity building at national and regional level, an area where UNDP has good experience to offer, will play an important part. This is not only to contribute to the reduction in loss and damage, but also to provide a scientific and operational base for assessment of existing assets vulnerable to climate change. It is imperative that the SBI work programme will rise to the challenge of improving the scientific and technical base in developing countries to allow for quantification of loss and damage from climate change, so an insurance mechanism can be based on substantive figures.

UNDP looks towards climate change from the perspective of Its human development mandate, and addressing loss and damage is essential for the safeguarding and improvement of livelihoods worldwide. It is clear that a cooperative approach is needed to provide the required scientific evidence to inform the management of climate change related damages and losses in small island states and help SIDS and other vulnerable states minimize the social, economic and environmental impacts of climate change. UNDP has also supported the evolution of SIDSDOC, a mechanism that allows AOSIS to access and effectively use donor funds to support Renewable Energy and Energy Efficiency efforts, thus mitigating climate change impacts globally while reducing the vulnerability of SIDS.

February 2011

The United Nations Framework Convention on Climate Change work programme on loss and damage

Input from the United Nations Environment Programme and the United Nations Environment Programme Finance Initiative

Contents

This input from UNEP and UNEP Finance Initiative is divided into the following parts:

1. Introduction – Purpose of document and the development of a loss and damage work programme under the Cancun Adaptation Framework

This document represents input from UNEP and UNEP Finance Initiative (collectively 'UNEP') on the elements of the loss and damage work programme, including offering to use existing and upcoming UNEP Finance Initiative platforms to help further develop the elements from now until the 18th Conference of the Parties (COP 18). The proposals, captured in Section 3, were developed through a consultative process including a workshop in London, UK on 16 February 2011 that engaged insurance industry representatives and other groups. The elements identified are 'placeholders' for issues that require further debate and development in the coming months. This submission has not only identified items for consideration and inclusion in the loss and damage work programme, but also highlighted areas where UNEP can contribute to further discussion, analysis and input. The primary channel for this discussion and input will be the upcoming global consultation process of UNEP Finance Initiative to develop Principles for Sustainable Insurance for the global insurance industry.

The significant experience and skills gathered in recent years in the areas of disaster risk reduction, insurance (e.g. microinsurance, index-based weather insurance and other parametric schemes) and alternative risk transfer instruments (e.g. insurance-linked securities) has stimulated interest among Parties on how the benefits from these risk management approaches and risk transfer instruments could be seized in the context of climate change adaptation. Efforts by Parties, Blocs (e.g. Alliance of Small Island States) and Observers (e.g. Munich Climate Insurance Initiative, ClimateWise, The Geneva Association, UNEP Finance Initiative) over the years have culminated in the loss and damage component of the Cancun Adaptation Framework.

The Framework acknowledges the potential benefits from risk management and risk transfer and has set in motion the development of a work programme on loss and damage associated with the adverse effects of climate change through one of the UNFCCC technical subcommittees—the Subsidiary Body for Implementation (SBI). This process could lead to the incorporation of risk management and risk transfer elements into the next international climate change regime architecture.

The SBI work programme aims to inform the UNFCCC process and make specific recommendations for a UNFCCC decision at COP18 in December 2012. As a starting point, the UNFCCC is inviting Parties (i.e. country governments) and relevant organisations (e.g. private sector platforms, civil society organisations) to provide input by 21 February 2011 on the design, modalities and thematic elements of this work programme, including the following:

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;
(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification;

(c) Approaches for addressing rehabilitation measures associated with slow onset events;
(d) Engagement of stakeholders with relevant specialized expertise

Our initial understanding and assessment of the four components of the loss and damage work programme is outlined below. This will be confirmed in greater depth by our proposals under Section 3 of this document.

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events

There is already significant experience within the insurance industry in the area of severe weather events, and there are examples of insurance facilities addressing this area at the local, national, regional or international level. However, new approaches and facilities and potentially new institutions will be required to operationalise mechanisms for vulnerable countries since they are currently outside the scope of commercial insurance.

(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification

There is already considerable activity in this area, involving the insurance industry and other disciplines such as disaster risk reduction.

- Physical risk management is a prerequisite for financial risk management. Such physical risk management is a responsibility of those at risk and the community to which they belong (in the case of vulnerable countries—the UNFCCC). The insurance industry can advise on how such measures can make risks insurable.

- Insurance-style risk sharing and risk transfer mechanisms are already in use in a variety of situations involving vulnerable communities and countries. Here there is a possibility that, provided appropriate regulatory and informational infrastructure and international support are put in place, such mechanisms can become self-sustaining in a commercial context.

- Resilience-building should incorporate lessons on how to 'climate-proof' existing activities to physical loss and damage. Here the insurance industry can contribute the knowledge and experience from its claims adjustment function.

(c) Approaches for addressing rehabilitation measures associated with slow onset events

This is the most difficult element of the work programme since it is a novel issue. The progress of slow onset events is still very uncertain, which makes the assessment of costs very difficult. However, it is

possible that some insurance tools (e.g. life insurance, pension provision, investment management) may be relevant.

(d) Engagement of stakeholders with relevant specialized expertise

There is currently no substantial process to achieve this. The proposals in this document will address this gap.

2. Catalysing global insurance industry input on the loss and damage work programme

2A. Global insurance industry input

It is vital to catalyse global insurance industry input on the development of the SBI loss and damage work programme, and to do so in a structured and complementary manner. The industry has gained much valuable experience and acquired skills in this field over decades. Global insurance industry input means that such input is derived from an inclusive and comprehensive process engaging the whole range of insurance industry operators and stakeholders. Structured input means that the views and recommendations of the global insurance industry will be generated in a substantive (e.g. in-person meetings) and cumulative manner (e.g. series of meetings). Complementary input means that consultations with the global insurance industry shall take place in support of and in line with the UNFCCC process of developing the SBI loss and damage work programme. This will help provide insurance industry input for consideration by Parties and Observers in a timely, effective and efficient manner. This can also enhance insurance industry responsiveness to the latest developments and circumstances of the UNFCCC process.

Global insurance industry input is important for the following reasons:

- Loss and damage associated with the adverse effects of climate change present a wide range of risks and opportunities to the global insurance industry in both its insurance and investment activities. Greater understanding of and reducing climate risks will enable the industry to better adapt itself to help support national adaptation efforts through risk management and risk transfer. It is important to stimulate innovation, uncover new opportunities and improve the insurance industry's ability to meet its commitments to all its stakeholders and better serve society.

- The global insurance industry possesses significant expertise and capacity on risk management and risk transfer, and insurance companies are also major institutional investors, all of which could be mobilised to more effectively and efficiently reduce climate risks and build climate-resilient communities.

2B. UNEP Finance Initiative input

UNEP Finance Initiative, the largest and oldest public-private partnership between the United Nations and the financial services sector—comprising insurance companies, banks and investment firms—aims to facilitate industry dialogue on loss and damage and provide substantive input to the UNFCCC process and the SBI loss and damage work programme.

A preliminary brainstorming workshop on the SBI loss and damage work programme was convened by UNEP Finance Initiative on 16 February 2011 in London, UK. The workshop engaged, among others, representatives from the UNFCCC Secretariat, UNEP, Alliance of Small Island States, insurance industry participants[1], and other insurance initiatives[2].

UNEP Finance Initiative convened the workshop to stimulate collective and coordinated action on the loss and damage issue, and to structure a global insurance industry process that would proactively and substantively follow through on the 'Global insurance industry statement on adapting to climate change in developing countries' that was jointly produced in 2010 by ClimateWise, Munich Climate Insurance Initiative, The Geneva Association and UNEP Finance Initiative.[3]

The workshop informed the conceptualisation of the components and deliverables of the loss and damage work programme outlined under Section 3 of this document. The aim of these components and deliverables is to enable an effective and efficient dialogue between the UNFCCC community and the global insurance industry in the short to medium term (2011-12), and in the long term (beyond 2012).

2C. The Principles for Sustainable Insurance Initiative

The consultation meetings on the SBI loss and damage work programme will be integrated as sessions into the wider scope of the upcoming global consultation process of UNEP Finance Initiative to develop Principles for Sustainable Insurance for the global insurance industry.

UNEP Finance Initiative will obtain input by undertaking a global consultation process, involving meetings in all regions. The meetings will convene senior representatives from the insurance industry and its stakeholders:

- Insurance and reinsurance companies, insurance and reinsurance agents and brokers, risk modelling vendors, insurance and reinsurance associations and initiatives (e.g. national, regional and international insurance associations, ClimateWise, Munich Climate Insurance Initiative, The Geneva Association)
- Governments and regulators (e.g. UNFCCC delegation members, finance ministries, environment ministries, insurance regulators)

[1] Lloyd's, Chartis Insurance, Parhelion Underwriting, The Willis Group
[2] ClimateWise, Munich Climate Insurance Initiative, The Geneva Association
[3] See www.unepfi.org/fileadmin/documents/insurance_climatechange_statement.pdf

- Intergovernmental organisations (e.g. UNFCCC Secretariat, relevant UN system agencies)
- Business and industry organisations
- Civil society organisations
- Academia and the scientific community

The outcomes of the global insurance industry consultation process will be submitted to relevant sessions and forums, including the 17th Conference of the Parties (COP 17) in Durban, South Africa.

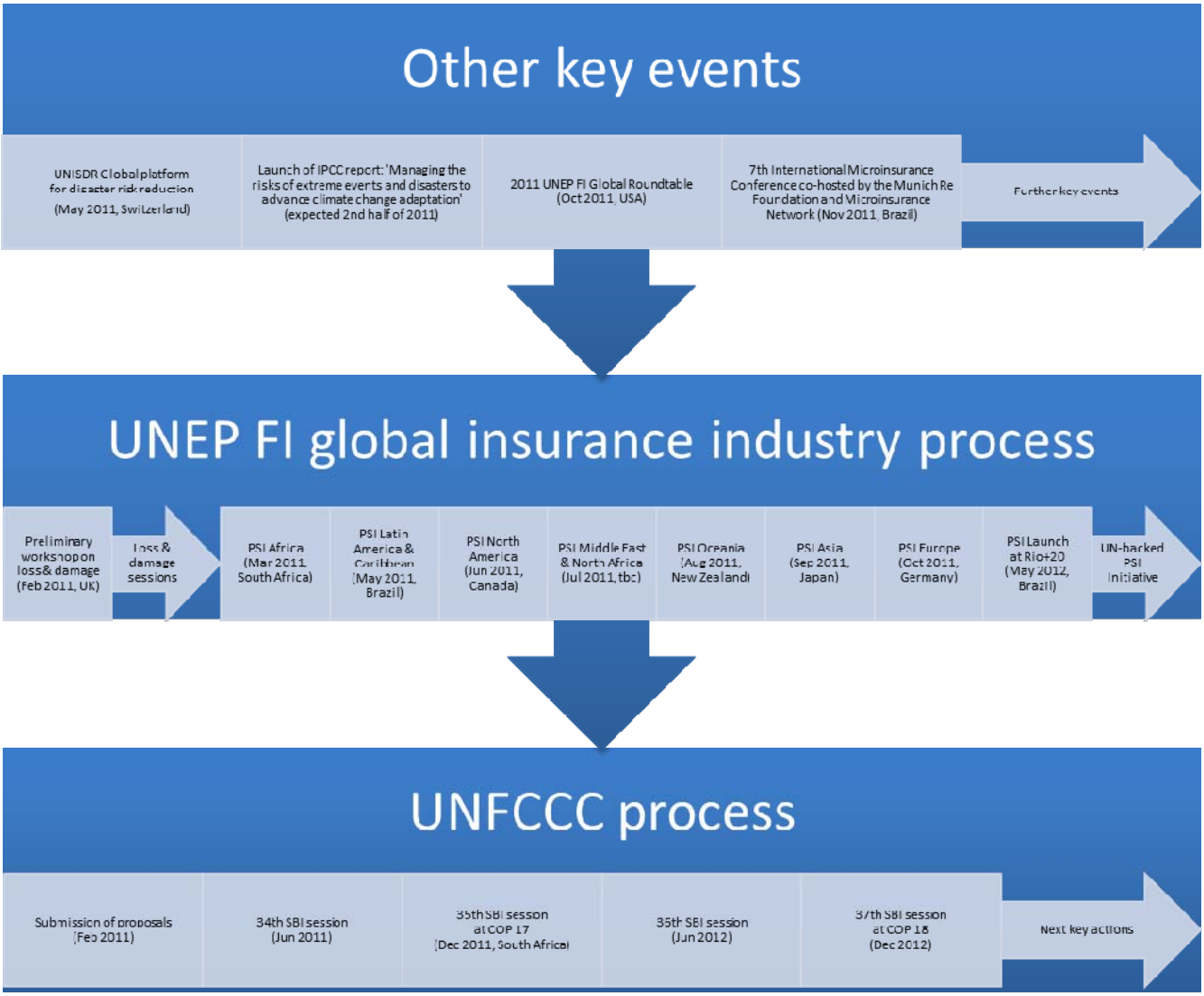
Please refer to Appendix A for:

- Background information on the Principles for Sustainable Insurance Initiative
- The dates, locations, host insurance institutions and CEO leadership of all meetings

2D. The 2011 UNEP FI Global Roundtable

Additionally, UNEP Finance Initiative has included a session on the SBI loss and damage work programme in the agenda of its biennial flagship event—the UNEP FI Global Roundtable. The event has spanned continents over the years and the next UNEP FI Global Roundtable will take place in Washington DC, USA from 19 to 20 October 2011. The event offers a global platform for leaders and professionals in the financial sector (across the banking, insurance and investment industries), along with senior representatives from governments, the broader business community, civil society and academia, to exchange views and best practices on environmental, social and governance risks and opportunities in the context of financial performance and sustainable development.

The figure below shows the timeline of relevant UNFCCC and UNEP Finance Initiative meetings, and examples of other key events.



3. Components and deliverables of the loss and damage work programme taking into account views from the insurance industry

As mentioned above, a preliminary brainstorming workshop on the SBI loss and damage work programme was convened by UNEP Finance Initiative on 16 February 2011 in London, UK.

The workshop led to the conceptualisation of the following components and deliverables of the loss and damage work programme. The aim of these components and deliverables is to enable an effective and efficient dialogue between the UNFCCC process and community and the global insurance industry in the short to medium term (2011-12), and in the long term (beyond 2012).

The aim of this dialogue is to help promote the understanding and incorporation of effective public-private approaches to risk management and risk transfer in the next international climate change regime. Moreover, the dialogue will promote the effective mobilisation of the significant expertise and capacity on risk management and risk transfer of the insurance industry in order to reduce climate risks and build climate-resilient communities.

Component 1 → Establish a common language on loss and damage

Speaking the same language is a foundation of effective dialogue. Currently, there appears to be no common language on loss and damage between the insurance industry and the UNFCCC community, and this could impede mutual understanding from the outset. In the insurance industry, risk transfer (in the form of insurance) is preceded by a range of fundamental risk management steps, including risk identification, risk assessment, risk prevention and risk reduction.

Therefore, a first short-term deliverable under the work programme should seek to bridge this gap. This could take the form of a glossary of terms in the context of risk management, risk transfer and climate change adaptation. This would also seek to be compatible with the definitions in use within the framework of the UN International Strategy on Disaster Reduction and the disaster risk reduction community.

Potential UNEP contribution: UNEP Finance Initiative, through its insurance company members and partners, could provide a draft of such terminology, if deemed useful by the UNFCCC Secretariat.

Component 2 → Establish a clear understanding of the scope, operations, needs and practices of the UNFCCC and the insurance industry

To realise effective public-private approaches to risk management and risk transfer, both the UNFCCC community and the insurance industry should have a clear understanding of each other's scope, operations, needs and practices. For example, the nature and scope of paragraph 28 under the Cancun Adaptation Framework— specifically items (a), (b) and (c)—can be interpreted by the insurance industry in different ways.[4]

Equally, it must be made clear what the insurance industry can deliver—and what it cannot. This should not be limited to previous models and paradigms, but should also include forward-looking ones that make the insurance industry a partner in efforts to support countries adapt to a changing climate. There is a need to identify the prerequisites from the public sector (at the local, national, regional and international levels) in order for the insurance industry to play a greater and sustainable role in climate change adaptation.

This includes, for example, the premise that involvement by the insurance industry at the required scale would need to be based on commercial grounds; that risk exposure data is available, reliable and accessible; and that insurance risk premiums accurately reflect the level of risk. Involvement by the insurance industry based on philanthropic grounds is unlikely to deliver the required scale and to be sustainable. Having said that, the insurance industry needs to articulate how it could be able to adapt its own insurance paradigm to better reflect the rapidly changing needs of countries and communities.

[4] See http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf

A clear understanding is essential of the nature, scope and level of risks (e.g. micro, meso or macro), and where the insurance industry is expected to and can play a role. This understanding is a prerequisite to provide answers to relevant questions such as:

- Should the work programme address unavoidable losses only, or should it also address those that are not avoided due to reasons of cost or technical constraints?
- Should the work programme address direct physical losses only, or also indirect losses such as loss of life and health, loss of livelihood or environmental degradation?
- Will the work programme address all weather-related loss and damage, or is it intended to handle only those attributed to climate change? If the latter, how will those losses be determined?
- Which risks can be best addressed nationally, regionally or internationally?
- Which risks can be addressed through existing tools and institutions and which may need new ones?

Potential UNEP contribution: The UNEP Finance Initiative consultation meetings can inform the insurance industry on the context of loss and damage in the UNFCCC process, and the nature of adaptation objectives under the Convention and the SBI work programme. A compilation of insurance industry views on their role in the SBI loss and damage work programme could be delivered as an input to UNFCCC negotiations at COP 17 in Durban, South Africa.

Component 3 → Use a principles-based approach to loss and damage in the context of climate change adaptation and insurance industry involvement

To support the aims of the Component 2 above, it is proposed that the work programme pursue a principles-based approach to loss and damage that would enable the prerequisites and conditions for effective, scaled up and sustainable involvement by the insurance industry in climate change adaptation efforts.

The rationale for a principles-based approach to address the loss and damage issue is that engineering a 'one-size-fits-all' solution will be difficult, and even if done, it will unlikely be effective. A principles-based approach will allow sufficient flexibility to determine the most appropriate solutions for the different types and levels of risk associated with loss and damage. Such principles can enable the UNFCCC community to more fully consider public-private approaches to risk management and risk transfer, and ways to effectively embed these elements in the next international climate change regime.
For example, the following overarching principles have already been articulated by certain institutions[5]:

- Country ownership (no 'one size fits all')
- Flexibility regarding integration in funding architecture
- Private sector involvement
- Principles of insurability have to be met

[5] See 'Insurance as an adaptation option under UNFCCC – Background paper' (INFRAS; International Research Institute for Climate and Society, Columbia University; Swiss Re; 2010) http://www.infras.ch/e/projekte/displayprojectitem.php?id=4280

In particular, the principles of insurability (including assessability, randomness, mutuality, economic viability) are intrinsic to the business model of the insurance industry.

Potential UNEP contribution: Dialogue and collaborative action on a principles-based approach to loss and damage and insurance industry involvement could be pursued via the Principles for Sustainable Insurance Initiative currently being developed by UNEP Finance Initiative, following the successful model of the United Nations-backed Principles for Responsible Investment[6] (see also Component 6).

Component 4 → Conduct research and propose pilot projects on public-private partnership models for integrated risk management approaches and climate insurance

Significant experience and skills have been gathered in recent years in the areas of disaster risk reduction, microinsurance, index-based weather insurance and other parametric schemes, and alternative risk transfer instruments such as insurance-linked securities (e.g. catastrophe bonds). This collective experience and the innovation it has stimulated needs to be considered in-depth by the SBI work programme, and should inform the assessment of priorities and needs, as well as the formulation of policy recommendations.

Based on previous experience and lessons learned, further research could assess and highlight current thinking and promising avenues on how innovative public-private partnership models and enabling policy, regulatory and legal frameworks can accelerate, expand and deepen insurance industry involvement in vulnerable countries.
Research should take stock of existing policy, regulatory and legal frameworks and the body of analysis and evidence available and address, in particular, how integrated risk management approaches[7] and climate insurance solutions can build the resilience of poor and vulnerable communities who do not have access to appropriate and affordable insurance.

Research and technical advice could be supplemented by identifying pilot projects in selected countries in order to facilitate implementation.

---

[6] UNEP Finance Initiative has had a similar experience regarding the Principles for Responsible Investment (PRI) that it conceptualised and delivered together with the UN Global Compact and investment industry. The PRI was launched in April 2006 by then UN Secretary-General Kofi Annan and subsequently endorsed by current UN Secretary-General Ban Ki-moon. The PRI swiftly became the global benchmark for responsible investing. To date, nearly 900 investors from 45 countries, representing more than USD 25 trillion in assets under management, have committed to implement the PRI and are progressively building sustainable capital markets through an active and global PRI Initiative. In January 2011, the Principles for Investors in Inclusive Finance (PIIF) were launched, providing a framework for responsible investment in inclusive finance. These principles were developed in response to growing interest and investments in inclusive finance and demand for investor guidance. The PIIF is an initiative of investors and Her Royal Highness Princess Máxima of the Netherlands, the UN Secretary-General's Special Advocate for Inclusive Finance for Development. The group developed PIIF together with the United Nations-backed Principles for Responsible Investment, the World Bank's Consultative Group to Assist the Poor, and several key industry players. The PIIF is housed by the PRI Initiative as a separate work stream. See www.unpri.org and www.unpri.org/piif

[7] See 'Insurance as an adaptation option under UNFCCC – Background paper' (INFRAS; International Research Institute for Climate and Society, Columbia University; Swiss Re; 2010) http://www.infras.ch/e/projekte/displayprojectitem.php?id=4280

Potential UNEP contribution:
Short to medium term (2011-12)

- A summary for policymakers of relevant information on practice, experience and success stories in the area of integrated risk management and climate insurance, building on previous work by various agencies, organisations and UNEP Finance Initiative itself, if deemed useful by the UNFCCC Secretariat.
- A shortlist of potential pilot projects to gain further knowledge, in order to develop a scaled-up work programme and facilitate implementation at the national, regional and international levels.[8]

Long term (beyond 2012)

- Dialogue and collaborative action to accelerate, expand and deepen the implementation of integrated risk management approaches and climate insurance solutions at the national, regional and international levels could be pursued via the Principles for Sustainable Insurance Initiative currently being developed by UNEP Finance Initiative (see also Component 6).

Component 5 → Address the lack of relevant, systematic and reliable risk data

A major obstacle to insurance industry involvement is the lack of relevant, systematic and reliable risk exposure data, both historical and forward-looking. UNEP Finance Initiative, through its Climate Change Working Group, and partners recently initiated a work stream on the issue of how existing gaps in the availability and accessibility of climate information could be addressed. This work stream will run in parallel to and aim to provide input into both the UNEP Finance Initiative global consultation process on loss and damage, and the SBI loss and damage work programme.[9]

There appears to be a role for the international community in improving data availability, reliability and accessibility. The question of whether and how international climate finance could be invested for this purpose is of significant importance and should be dealt with as early as possible in the SBI work programme. At the same time, a wide range of tools and methods exist in the insurance industry (e.g. climate and catastrophe risk models, Global Earthquake Model Initiative) that could form the foundation of more systematic risk assessment at the national and sub-national levels. These tools and methods need to be analysed, complemented by other appropriate assessment tools, and integrated into UNFCCC planning (e.g. National Action Programmes) and reporting (e.g. National Communications).

Potential UNEP contribution: Proposals for a work stream in collaboration with relevant meteorological, academic and public agencies

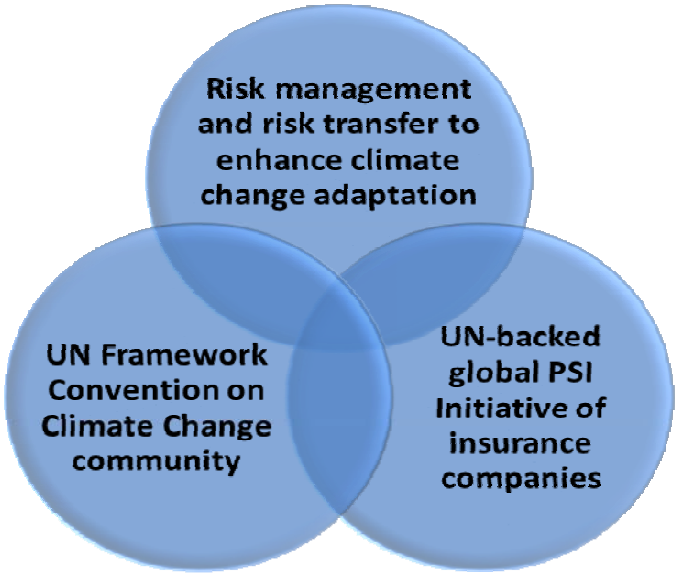
[8] See 'Mechanisms to manage financial risks from direct impacts of climate change in developing countries – Technical paper' (UNFCCC, 2008) http://unfccc.int/resource/docs/2008/tp/09.pdf

[9] See 'Advancing adaptation through climate information services – Results of a global survey on the information requirements of the financial sector' (UNEP Finance Initiative, Sustainable Business Institute; 2011) www.unepfi.org/fileadmin/documents/advancing_adaptation.pdf

Component 6 → Initiate long-term dialogue and collaboration between the UNFCCC community and the global insurance industry

The nature, scale and timeframe of loss and damage associated with the adverse effects of climate change require long-term dialogue and sustained collaboration between the UNFCCC community and the global insurance industry.

Potential UNEP contribution: The Principles for Sustainable Insurance (PSI) that UNEP Finance Initiative is developing for the global insurance industry will establish a United Nations-backed, global PSI Initiative of insurance companies proactively addressing a wide range of environmental, social and governance risks and opportunities. The PSI Initiative can therefore serve as an effective and efficient global platform for the insurance industry to support the UNFCCC process on loss and damage, including risk management and risk transfer elements that can form part of the next international climate change regime, and the development and implementation of appropriate risk management approaches and risk transfer instruments at the local, national, regional or international levels. Equally, the PSI Initiative can catalyse enhanced collaboration and coordinated action between various insurance initiatives in support of a common climate imperative.



Appendix A

Background information on the Principles for Sustainable Insurance Initiative

I. Aims of the Principles for Sustainable Insurance

The PSI has two primary aims:

- **The development of the principles themselves –** A set of globally-applicable best practice principles—including concrete actions for success—that would facilitate the systematic consideration of environmental, social and governance risks and opportunities in core insurance company business strategies and operations, including risk management, risk underwriting, product and service development, claims management, sales and marketing, and investment management (via the United Nations-backed Principles for Responsible Investment)

- **The establishment of the PSI Initiative to drive the adoption and implementation of the principles –** A United Nations-backed global initiative of insurance companies proactively addressing environmental, social and governance risks and opportunities based on their commitment to implement the principles

Key environmental, social and governance risks and opportunities for the insurance industry include climate change, natural catastrophe risks, disaster risk reduction, biodiversity loss and ecosystem degradation, water scarcity, pollution, human rights, social and financial inclusion, emerging health risks, ageing populations, regulations, disclosure and transparency, business ethics and principles, and alignment of interests.

II. Background on the initiative to develop Principles for Sustainable Insurance

From 2007 to 2009, the UNEP FI Insurance Working Group, comprising leading global insurers, produced pioneering research on the impacts of environmental, social and governance risks and opportunities on the

insurance business and sustainable development.[10] In 2010, UNEP FI co-produced with other insurance initiatives a global insurance industry statement on adapting to climate change in developing countries.[11]

Following these research outputs, a core group of globally-operating UNEP FI insurance company members[12] (the 'PSI Team') embarked on the initiative to develop Principles for Sustainable Insurance.

From November 2009 to February 2011, the PSI Team undertook an extensive process of in-depth deliberations to produce a global consultation version of the principles.

III. The 2011 PSI Regional Consultation Meetings

The purpose of the 2011 PSI Regional Consultation Meetings is to obtain global input on the principles. The meetings will be UNEP FI-facilitated, insurance industry-led and multi-stakeholder, and will be held in seven geographic regions—Africa, Asia, Europe, Latin America and the Caribbean, Middle East and North Africa, North America, and Oceania.

The nature and scope of these meetings are ground-breaking and will ensure that the PSI development process is global, inclusive and consultative.

This early, the PSI Initiative is already fully supported by the South African Insurance Association, and there will be continued efforts to seek support from other insurance associations around the world.

Each regional meeting will be a two-day event including a networking reception, a comprehensive presentation on the background and aims of the PSI Initiative, a CEO-led discussion, and a full-day interactive workshop with brainstorming sessions and roundtable discussions to maximise collective learning experience.

Insurance industry representatives will include Board Chairs and Members, Chief Executive Officers and other executive management functions, Chief Underwriting Officers, Chief Risk Officers, Chief Investment

[10] See 'Insuring for sustainability – Why and how the leaders are doing it' (UNEP Finance Initiative, 2007) www.unepfi.org/fileadmin/documents/insuring_for_sustainability.pdf; 'Making forests competitive – Exploring insurance solutions for permanence' (UNEP Finance Initiative, 2008)www.unepfi.org/fileadmin/documents/Exploring_Insurance_Solutions_for_Permanence.pdf; 'The global state of sustainable insurance – Understanding and integrating environmental, social and governance factors in insurance' (UNEP Finance Initiative, 2009) www.unepfi.org/fileadmin/documents/global-state-of-sustainable-insurance_01.pdf

[11] See 'Global insurance industry statement on adapting to climate change in developing countries' (ClimateWise, The Geneva Association, Munich Climate Insurance Initiative, UNEP Finance Initiative; 2010) www.unepfi.org/fileadmin/documents/insurance_climatechange_statement.pdf

[12] The UNEP FI insurance company members leading the PSI Initiative and their respective countries of domicile are Achmea (Netherlands), Allianz (Germany), Argo Group (Bermuda), Aviva (UK), AXA (France), Chartis (US), Folksam (Sweden), HSBC Insurance (UK), Insurance Australia Group (Australia), Interamerican Hellenic Insurance Group (Greece), Lloyd's (UK), MAPFRE (Spain), Munich Re (Germany), RSA Insurance Group (UK), Santam (South Africa), Sompo Japan (Japan), Sovereign (New Zealand), Storebrand (Norway), Swiss Re (Switzerland), The Co-operators Group Ltd. (Canada), The Willis Group (UK), and Tokio Marine and Nichido (Japan).

Officers, Heads of Strategy, Heads of Sustainability or Corporate Responsibility, and other relevant functions.

UNEP FI will also be inviting senior representatives from insurance industry stakeholders such as governments and regulators, intergovernmental organisations, business and industry, civil society, academia, and the scientific community.

The 2011 PSI Regional Consultation Meetings are the first of their kind. They represent an exceptional opportunity to convene the global insurance industry and its stakeholders to collectively address sustainability issues.

IV. Schedule of the 2011 PSI Regional Consultation Meetings

PSI Regional Consultation Meeting for Africa

Dates and location : 15-16 March, Johannesburg, South Africa
Hosts : Santam and the South African Insurance Association
PSI Leadership : Ian Kirk, Chief Executive, Santam
Barry Scott, Chief Executive, South African Insurance Association

PSI Regional Consultation Meeting for Latin America and the Caribbean

Dates and location : 16-17 May, Sao Paulo, Brazil
Host : HSBC Insurance Brazil
PSI Leadership : Fernando Moreira, Chief Executive Officer, HSBC Insurance Brazil

PSI Regional Consultation Meeting for North America

Dates and location : 12-13 June, Guelph, Ontario, Canada
Host : The Co-operators Group Ltd.
PSI Leadership : Kathy Bardswick, President and Chief Executive Officer, The Co-operators Group Ltd.

PSI Regional Consultation Meeting for the Middle East and North Africa

Dates and location : July, exact dates and location to be advised
Host : The Willis Group
PSI Leadership : Grahame Millwater, President, The Willis Group

PSI Regional Consultation Meeting for Oceania

Dates and location : 11-12 August, Auckland, New Zealand
Host : Sovereign
PSI Leadership : Charles Anderson, Chief Executive Officer, Sovereign

PSI Regional Consultation Meeting for Asia

Dates and location : 5-6 September, Tokyo, Japan

Host : Tokio Marine and Nichido Fire Insurance Co., Ltd.
PSI Leadership : Shuzo Sumi, President, Tokio Marine and Nichido Fire Insurance Co., Ltd.

PSI Regional Consultation Meeting for Europe
Dates and location : 25-26 October, Munich, Germany
Host : Munich Re
PSI Leadership : Nikolaus von Bomhard, Chairman of the Board of Management, Munich Re

V. Launch of the PSI at the 2012 UN Conference on Sustainable Development

The Principles for Sustainable Insurance underpin many UN aims such as the UN Framework Convention on Climate Change, Hyogo Framework for Action, UNEP Green Economy Initiative, UN Millennium Development Goals, UN Convention on Biological Diversity, Universal Declaration of Human Rights, International Labour Organization's Declaration on Fundamental Principles and Rights at Work, UN Convention against Corruption, UN Global Compact Principles, and United Nations-backed Principles for Responsible Investment.

In line with UNEP's strategy, UNEP Finance Initiative is committed to launching the principles at the UN Conference on Sustainable Development ('Rio+20 Conference') in Rio de Janeiro, Brazil in May 2012. The launch of the principles will represent a landmark contribution and long-term commitment of the global insurance industry—in partnership with the UN— to the goals of sustainable development.

The launch of the principles will also mark the commencement of the PSI Initiative as a global partnership between the UN and the insurance industry to promote the adoption and support the implementation of the principles.

VI. The PSI Initiative in 2012 and beyond

En route to and after the launch of the principles and the PSI Initiative in 2012, it is expected that a critical mass of insurance companies globally will adopt the principles.

The PSI Initiative is designed to serve as a catalytic global platform to address environmental, social and governance issues and facilitate their strategic and operational management in the insurance business, and to foster sustainable development in and via one of the world's largest economic sectors—the insurance industry.

Overall, the PSI Initiative will:

- Enable insurance companies to have a more complete understanding of material risks and holistic risk management practices in order to reduce risk, stimulate innovation and increase opportunities to enhance financial returns, business performance and company value

- Create a global forum for the insurance industry and the UN to establish thought leadership on environmental, social and governance issues in the context of risk management and insurance; to pool information, resources and best practices; and to foster inclusiveness across markets

- Promote cooperation on environmental, social and governance issues where the insurance industry and the UN needs to in order to reduce long-term and systemic risks, develop appropriate risk management approaches, risk transfer solutions and partnerships, and enhance the value of risk management and insurance to society

- Support the insurance industry in engaging with governments and regulators to ensure that relevant environmental, social and governance issues are considered within prudential policy, regulatory and legal frameworks to benefit the insurance industry and society

- Build a more resilient, responsible and sustainable insurance industry to better serve all its stakeholders, and in partnership with the UN, accelerate the transition to a sustainable global economy and advance the goals of sustainable development

Appendix B

UNEP contact persons

UNEP

Kaveh Zahedi
Climate Change Coordinator
UNEP
kaveh.zahedi@unep.org
T: +33 1 4437 3033

United Nations Environment Programme
15 rue de Milan
75441 Paris Cedex 09
France
www.unep.org/climatechange

UNEP Finance Initiative

Butch Bacani
Programme Leader
Principles for Sustainable Insurance Initiative
& UNEP FI Insurance Commission
UNEP Finance Initiative
butch.bacani@unep.org
T: +41 22 917 8777

Remco Fischer
Programme Officer
Climate Change
UNEP Finance Initiative
remco.fischer@unep.org
T: +41 22 917 8685

United Nations Environment Programme Finance Initiative
International Environment House
15 chemin des Anémones
1219 Châtelaine, Geneva
Switzerland
www.unepfi.org

Paper no. 29: United Nations International Strategy for Disaster Reduction

Opportunities to enhance action on adaptation under Decision -/CP.16 and the Cancun Adaptation Framework

Submission by the United Nations secretariat of the International Strategy for Disaster Reduction (UNISDR) to the UNFCCC Ad Hoc Working Group on Long-term Cooperative Action and the UNFCCC Subsidiary Body for Implementation

Background

To capitalize on the momentum of the successful outcome of UNFCCC COP 16 in Cancun, the International Strategy for Disaster Reduction (ISDR) Support Group established an informal group of Governments. The United Nations secretariat of ISDR (UNISDR) facilitated the work of the informal group and the development of a set of recommendations which are informed by views the UNFCCC Parties and ISDR system partners.

The informal group convened twice to assist the UNISDR secretariat to develop a final set of proposed views, which are intended to assist Parties and relevant organizations effectively address the issue of disaster risk reduction, as invited by UNFCCC decision -/CP.16.[1]

The fact that the Cancun Adaptation Framework (CAF) calls for "enhanc[ed] climate change related disaster risk reduction strategies" and mentions the Hyogo Framework for Action by name represents significant progress strengthening the implentation of adaptation and the reduction of climate-related disaster risks.[2] In particular, the CAF forms the basis for strategic and focused suggestions regarding the form and function of the Adaptation Committee and elements to facilitate the integration of climate change adaptation and disaster risk reduction via the proposed work plan on loss and damage associated with climate change impacts.[3]

The views in this submission focus on two fundamental points: the relevance to climate change adaptation of efforts carried out under the Hyogo Framework for Action to reduce and manage risk to extreme climate events, in both policy and practice; and second, that disaster risk reduction and adaptation have the most leverage when placed at the centre of national development planning.

In light of above, the longer-term perspective of the views provided in this document is to support Parties and the Subsidiary Body for Implementation (SBI) to develop a process to enable least developed country Parties to formulate and implement national adaptation plans and to effectively integrate disaster risk reduction and climate change adaptation efforts into the proposed process.

The views below were circulated in draft form to the ISDR Inter-Agency Group (IAG) and other ISDR partners. They benefited from inputs from the United Nations University (UNU), the Global Facility for Disaster Reduction and Recovery (GFDRR), the Office of the High Commissioner on Human Rights (OHCHR), ACT Alliance, among others.The proposed views in this document relate specifically to the submissions concerning:

[1] "Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention."
[2] Ibid., Paragraph 14(e).
[3] Ibid, Paragraph 26.

1. Views on the composition of, and modalities and procedures for, the proposed Adaptation Committee, including on proposed linkages with other relevant institutional arrangements;[4] and

2. Views and information on what elements should be included in the work programme, including, including through workshops and expert meetings, approaches to address loss and damage associated with climate change impacts in developing countries.[5] These include the following:
    a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;
    b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification;
    c) Approaches for addressing rehabilitation measures associated with slow onset events;
    d) Engagement of stakeholders with relevant specialized expertise.

1. Views related to the Adaptation Committee

It is suggested that the Parties consolidate the link between the activities carried out to implement the Hyogo Framework for Action and its related institutional mechanisms established by the UN General Assembly under the International Strategy for Disaster Reduction (ISDR) and the Adaptation Committee.

Therefore, the following views, if taken into consideration, would "promot[e] synergy and strengthen [. . .] engagement with national, regional and international organizations, centers and networks" (Paragraph 20(c)). Such action is also in line with the Parties' request to enhance climate change related disaster risk reduction strategies, taking into consideration the Hyogo Framework for Action where appropriate; early warning systems; risk assessment and management; and sharing and transfer mechanisms such as insurance, at local, national, sub regional and regional levels.

Ad Hoc Working Group on Long-term Cooperative Action (Decision -/CP.16, Para. 21)	**Views on the Adaptation Committee**
Invites Parties to submit to the secretariat, by 21 February 2011, views on the composition of, and modalities and procedures for, the Adaptation Committee, including on proposed linkages with other relevant institutional arrangements;	1. The composition of, and modalities and procedures for the Adaptation Committee should reflect the importance of disaster risk reduction as a crucial element of climate change adaptation, with a focus on expertise and know-how that exists in developing countries and regional organizations. Recognizing that extreme climate events is only one aspects of climate risk to be addressed by the Adaptation Committee. 2. The Parties should establish a mechanism to formalize the integration of disaster risk reduction experts (from governments, international

[4] Ibid., Paragraph 21.
[5] Ibid, Paragraph 28.

	organizations, research institutes, civil society and the private sector) to assist the Adaptation Committee in its proposed functions[6] as set out in Decision -/CP.16. 3. To achieve the above, the above mechanisms under the Adaptation Committee should be composed of experts with technical expertise on planning and implementing disaster risk reduction and adaptation, particularly: - Experts from national meteorological services; - National focal points and experts in disaster risk reduction; and - Experts from development agencies. 4. The Adaptation Committee should be able to provide guidance and support on emerging issues.

2. Views related to the work programme to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change

The work program should prioritize activities that contribute to strengthening capacities in countries with high levels of vulnerability in addressing natural hazard risk and adapting to climate change extreme events—in particular, activities that contribute to sustainable development efforts and align with existing disaster risk reduction expertise and priorities that are regularly set out by the ISDR Global Platform for Disaster Risk Reduction Sessions.

In this context, the secretariats of the UNFCCC and UNISDR should ensure the integration of disaster risk reduction experts in all relevant UNFCCC workshops and expert meetings.

The recommendations below suggest how Parties can improve the effectiveness of adaptation through existing UNFCCC bodies and processes. The proposed activities will support the work program areas as described in -/CP.16, Paragraph 28, while contributing to the objectives of the Hyogo Framework.

Finally, the outcomes of the proposed activities are mutually reinforcing: for example, the workshop on effective development investment will also provide guidance on measures concerning slow-onset events. Similarly, the outcomes of the workshop/technical paper on extreme events can also be used to: identify the countries and regions most vulnerable to the impacts of climate change;

[6] These include, but are not limited to the following:
- provide technical support and guidance to the Parties;
- strengthen information and knowledge sharing;
- promote engagement with national, regional and international organizations and networks;
- provide information and recommendations to enable climate resilient development and reduce vulnerability;
- strengthen data and knowledge systems; and
- improve climate-related research and systematic observations for modeling.

assess the most cost-effective instruments and tools for reducing climate-related risks; and informing development and national investment policies.

Ad Hoc Working Group on Long-term Cooperative Action (Decision -/CP.16, Para. 28)	**Proposed elements**
Invites Parties and relevant organizations to submit to the secretariat, by 21 February 2011, views and information on what elements should be included in the work programme, including the following: (a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events; (b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification; (c) Approaches for addressing rehabilitation measures associated with slow onset events; (d) Engagement of stakeholders with relevant specialized expertise	1. An expert meeting on insurance mechanisms and disaster risk reduction. Elaborating on already carried out work on insurance mechanisms for climate change impacts under the UNFCCC, this workshop should address specific risk sharing mechanisms that provide incentives for reducing risk and assist in furthering strategies for risk reduction. *Expected outcomes:* - Provide guidance on how climate risk insurance can be used to reduce risks - Support consensus-building with respect to what types of climate risks the proposed facility would cover 2. A workshop and/or technical paper on integrating disaster risk assessment and climate change impact assessment approaches to support decision making in the context of national and local development planning. *Expected outcomes:* - Adoption of a standard methodology for assessing climate change impacts - Methods and tools for assessing risk to extreme climate events to guide adaptation planning, disaster risk management strategies and insurance work. - Identification of capacity gaps and challenges for conducting joint assessments at regional, national, and sub-national scales 3. Potentially combined with the above workshop, convene an expert meeting on Effective Development Investment that reduces natural hazard risk and increases adaptive capacity to climate change impacts. *Expected outcomes:* - Information sharing concerning the type of investments that would allow developing country Parties to reduce and manage climate-related risks at scale rather than on a project-by project basis. - Formulation of guides and tools to integrate the climate resilience analysis in the cycle of projects and in the Public Investment systems

	4. A workshop on early warning system building on the networks and expertise developed in the three International Conferences on Early Warning under the ISDR and focusing on early warning systems in the context of climate change. *Expected outcomes:* - Guidance on integration of long-term forecasting and climate predictions into decision making and preparedness plans - Assessment of capacities and gaps for monitoring gradual changes in temperature, precipitation and climate variability - Recognition of internationally accepted standards, including those that pertain to human rights, to guide early warning systems, with a focus on the dissemination to vulnerable groups and preparedness
	5. Regional workshops on climate change adaptation and disaster risk reduction building on the existing regional intergovernmental organizations[7] partnerships under the ISDR. *Expected outcomes:* - Guidance on integrated climate change adaptation and disaster risk reduction plans - Strengthened links between regional adaptation and disaster risk reduction - Integration of national reporting against the UNFCCC and the Hyogo Framework. - Guidance on a joint reporting mechanism for disaster risk reduction and climate change adaptation - Guidance for national planning and priority setting and provide opportunities to exchange good practices between countries and regions - Support for regional and national academic systems of research on the development of norms and codes for the climate resilience construction of public infrastructures and human settlements 6. The UNISDR and UNFCCC secretariats should convene and promote "Synergy" workshops for climate change adaptation and disaster risk reduction focal points, at all levels of government and in the UN Missions communities, designed to improve knowledge sharing and coordination between climate change and disaster risk reduction focal points. *Expected outcomes:* - Adaptation plans that leverage existing disaster risk reduction capacities - Better harmonisation of key concepts and terms related to adaptation and disaster risk reduction - More robust communication and information sharing platform that could lead to more efficient meetings and conferences of the Parties

[7] Such as the African Union, Association of South East Asian Nations, Comité Andino para la Prevención y Atención de Desastres, Caribbean Disaster and Emergency Management Agency, Council of Europe, Economic Cooperation Organisation, League of Arab States, South Asian Association for Regional Cooperation, Secretariat of the Pacific Community/SOPAC, etc.

Paper no. 30: United Nations University

SUBMISSION BY THE UNITED NATIONS UNIVERSITY
Institute for Environment and Human Security (UNU-EHS in Bonn)

SBI Work Program on Loss and Damage: Ideas for work streams and areas of discussion up to and beyond COP18

21 February 2011

Prepared for Party consideration at the Thirty-Fourth Session of the UNFCCC Convention subsidiary bodies - SBSTA and SBI

Keywords: SBI Work Program on Loss and Damage, Cancun Adaptation Framework, risk management, data management, climate adaptation, climate change, risk reduction and prevention, risk transfer, from knowledge to action

PLEASE COMMENT: This submission has benefited from the feedback and ideas of many different experts and delegations. We welcome your comments.

Submission by the United Nations University (UNU), Institute for Environment and Human Security, 21 Feb. 2011

1. Introduction

The need is greater than ever to reduce and transfer risk in ways conducive to climate change adaptation and sustainable development. The Cancun Adaptation Framework (contained in -/CP.16) suggests that the Subsidiary Body for Implementation (SBI) make recommendations on loss and damage to the Conference of the Parties for its consideration at COP18, as well as to strengthen international cooperation and expertise to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events. This submission by UNU outlines suggestions for elements for the SBI Work Program on Loss and Damage[1], as articulated in paragraphs 25 – 29 of Draft Decision - / CP.16.

[1] Para 28

Goals of the SBI Work Program on Loss and Damage

The Work Program on Loss and Damage should be an ongoing process of supporting implementation activities related to loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change[2]. As outlined in paragraphs 25 – 29 of Draft Decision - / CP.16, the Work Program will have the following goals:

- **Advance understanding of and the reduction of loss and damage**. On an ongoing basis[3] , the SBI Work Program will strengthen international cooperation and expertise to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events[4] The SBI Work Program will catalyse existing and future activities on loss and damage through exchange of ideas between Parties and experts. The SBI Work Program provides a useful avenue for relevant stakeholder organizations to signal what kinds of actions would be needed from Parties to catalyse action (e.g. provision of data about risk, information about ongoing and planned risk management priorities or actions, etc.); and for Parties to signal what kinds of questions they would seek responses to from relevant organizations (e.g. about existing experience, scope of possible tools and approaches, technical requirements, assessments, etc.).
- **Promote the prevention and minimization of loss and damage**. Preventing or minimizing loss and damage is the bedrock of effective risk management. It may lower demands for adaptation funding, or enhance the ability to devote resources to other high-return adaptation activities. Disaster risk reduction can complement sustainable development, and dampen the negative cycle of hazards and poverty[5]. Disaster risk management and reduction are featured in the Cancun Adaptation Framework (paras 13 - 14), and span the range of rapid- and slow-onset hazards that can cause loss and damage. Activities related to loss and damage must be viewed as part of a climate risk management strategy that includes, first and foremost, activities that prevent human and economic loss and damage from climate variability and extremes. Activities and ultimately the recommendations by the SBI to COP18 should underscore the need to design and implement all activities with an aim to prevent and reduce loss and damage. A range of measures will be needed, but all should work towards the goal of risk reduction and take into account the principles of the Hyogo Framework of Action. All actions should strive to complement and enhance the ability of National Platforms under Hyogo to prevent and reduce loss and damage at the national and sub-national levels. Additionally, recommendations by the SBI Chair should consider what activities under the Convention can catalyse prevention and reduction of loss and damage internationally, and in areas where concerted international efforts can fill gaps which individual governments—especially in vulnerable countries—may struggle to fill alone. For activities undertaken under the

[2] Para 26
[3] e.g. leading beyond COP18, with a time period to be defined or open ended as appropriate
[4] Para 25
[5] Barnett et al. 2008; Dercon 2005

auspices and guidance of the Convention, SBI recommendations should consider that progress in prevention and avoidance of loss and damage could help Parties qualify for participation in additional measures such as insurance or other forms of risk management beyond risk reduction.

- **To provide a framework for activities[6] that lead to implementation of measures to reduce loss and damage**. The Work Program will, through workshops, events and other modes as appropriate, support SBI with information so that it is in a position to make recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session[7]. The UNFCCC process may benefit from views about what activities are already being undertaken, what innovative new approaches are possible to design (both under the Convention and outside of but in harmony with it), and what kinds of activities may remain unrealistic for the foreseeable future (or what kinds of criteria would be needed to make such activities possible).

2. Build clear work streams that prioritize avoidance of loss and damage

It is helpful **to frame the discussion** i**n terms of clea**r work streams (either as clearly defined agenda items, or as separate but complementary discussions) so that **progress in one area is not dependent on progress in another**. This approach will help ensure that Parties are supported in their goal to increase understanding of loss and damage issues by having a clearly structured and transparent structure. Additionally, the approach will ensure that Parties are supported in a pragmatic discussion that moves towards the articulation of implementation options which can then be sent to COP18 for consideration.

The work streams are meant to start as soon as SBI approves the Work Program on Loss and Damage; but as noted above it would be highly desirable for the **Work Program to continue after COP18** to support Parties in questions related to the implementation of approaches to loss and damage. The work streams could encompass three areas considered important for thinking about, designing, and implementing measures to address loss and damage, to support the formation of recommendations for COP18. These three areas are outlined below (the elements from paragraph 28 (a - c).

Assess and characterize exposure to loss and damage[8] relevant to risks from extreme events at the micro, meso, and macro levels[9], and longer-term foreseeable risks[10].

[6] such as events and workshops as appropriate, para 26
[7] Para 29
[8] Exposure could be assets like man-made (such as infrastructure), natural (such as ecosystem services like fresh water), and social (such as livelihoods). As the SBI Work Program focuses on issues related to the implementation of measures to address loss and damage, there may be an argument for addressing the first three assets (man-made, natural, and social), and recognizing the importance of (but not valuing) things like human life and health culture, and ethics which are of inestimable worth and value.
[9] Paras 28(a) and 28(b) deal with weather variability and extreme events (often of a rapid-onset nature).
[10] Para 28(c) refers to longer-term foreseeable exposure to loss and damage, such as sea level rise and desertification processes.

Risk management options are needed more today than ever (see, e.g. Stern at al. 2007), yet one of the basic requirements for effective management and reduction of loss and damage is risk assessment and understanding what is exposed to loss and damage. This is especially the case for developing countries where data is sometimes less available. The SBI Work Program on Loss and Damage should help them understand what tools are needed[11] to help Parties characterize exposure (i.e. risk assessment, mapping, typologies of assets exposed to loss and damage) through rapid-onset events like weather extremes, or through slower-onset foreseeable events related to climate change)[12]. It could prove interesting to explore whether assessment activities could also be useful for other areas of adaptation, such as to draw attention to sectors, geographic regions, etc. which may need particular attention. This area of discussion could begin discussion of the role of the Convention in supporting/catalyzing the assessment, mapping, modeling, and evaluation of risks[13].

Some countries already have established institutions dealing with risk reduction and risk transfer, while others do not. In most developed countries, disaster risk reduction is dealt with by institutions and arrangements that are separate from those in place for risk transfer mechanisms. In many developing countries there are no established risk transfer mechanisms and so there are no institutions, which are responsible for them. In the context of climate change with a heightened need to manage, reduce risk and prevent losses, it will be increasingly useful to have coordinated mechanisms that incentivize risk reduction and loss prevention, and ensure that risk transfer approaches complement and accelerate adaptation. One important benefit of such a risk management approach could be that institutions dealing with risk reduction and risk transfer could also have the responsibility for gathering data about climate-related risks, measure and map risks and raise awareness of them – activities that catalyse and improve overall adaptation efforts and improve the effectiveness and efficiency of limited adaptation funding.

Therefore, the SBI Work Program should help Parties **identify and make plans for reducing the potential for loss and damage related to weather extremes, and longer-term shifts in climatic patterns**. This is especially useful for that range of activities outlined in Para 28 (b), many of which already exist but could use assistance in getting to scale The principles of disaster risk reduction laid out in the Hyogo Framework of Action serve as a guideline (UNISDR 2005). The SBI Work Program could request Parties to share, or express their views on; what their countries have done in the following risk management activities:

- Gathering data and mapping high-risk zones
- Building codes and other regulatory measures to reduce buildings in hazard-prone areas, and improve the physical resilience of structures and houses

[11] Also refer to the WMO „Climate Services for All“ program.

[12] Para 28 (b and c). It could be helpful for Parties to help sort out „what is the nature of the problem” and understand the relationship between loss and damage and either weather-related extreme events, or longer-term foreseeable processes. Implementation of measures will likely look different, depending on whether impacts are associated with rapid-onset events or slow-onset processes. So it could make sense to start the discussion by characterizing and assessing exposure to loss and damage.

[13] UNFCCC (2008). “Report on the workshop on risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance: Summary by the chair of the workshop.” Available on the UNFCCC website, document FCCC/AWGLCA/2008/CRP.7 from 6 December 2008.

- Protecting and developing hazard buffers (forests, reefs, etc.)
- Developing a culture of prevention and resilience
- Improving early warning and response systems
- Building institutions, and development policies and plans

Range of instruments and their respective functions[14] to address exposure to loss and damage. This level of discussion in each work stream would explore experience using particular instruments/approaches for the kinds of exposure to loss and damage addressed in each work stream. This area could help articulate lessons learned, good practice, challenges, analysis of relevance of various instruments in the context of adaptation, etc.

As outlined in paras 28 (b) and 28 (a), additional adaptation tools including insurance may be part of discussions on loss and damage. It is recommended that the SBI Work Program explore those current experiences which link disaster risk reduction and other risk management tools, and develop a set of design principles for measures to address loss and damage. It is important to keep the focus on avoiding loss and damage, and to help disaster risk reduction serve as a portal through which countries pass in order to realize the additional adaptation benefits of risk transfer tools like insurance. For climate-related risks which cannot be further reduced in an efficient way, such as the risk of natural hazards, measures can be used to share or transfer risk, including the use of reserve funds, social safety nets, contingent credit arrangements and a variety of risk transfer tools like insurance. Ongoing participation/renewal of insurance coverage with international support could be dependent upon some evidence that participating vulnerable countries are making tangible progress in implementing their disaster risk reduction plans.

Options for implementation of activities[15] **to address** loss and damage relevant to micro and meso and macro level risks[16], and longer-term foreseeable risks [17]. as appropriate. This area could explore alternative combinations of elements needed for implementation, both under the Convention as well as options that could be implemented in ways that are complementary to Convention activities. This area of the discussions could explore what implementation options would look like, depending on different **combinations of issues such as Party needs,** institutional arrangements/ operational entity, governance considerations, alternative financial arrangements, etc. Implementation options should consider placing the avoidance and reduction of loss and damage as a leading priority.

[14] Para 28 (b and c).
[15] Para 28 (a, b and c). Once Parties have had a chance to examine areas of concern (assets at risk of loss and damage), the range of possible tools to address rapid-onset events and longer term foreseeable events and their functions, then Parties can begin considering options for development of approaches to address loss and damage. These options could outline design elements for approaches for managing rapid-onset loss and damage issues (climate risk insurance facility and other forms of insurance linked to disaster risk reduction) and for managing foreseeable slow onset processes (options for operational design for such approaches).
[16] Paras 28(a) and 28(b) deal with weather variability and extreme events (often of a rapid-onset nature).
[17] Para 28(c) refers to longer-term foreseeable exposure to loss and damage, such as sea level rise and desertification processes.

Activities related to loss and damage must be viewed as part of a climate risk management strategy that includes, first and foremost, activities that prevent human and economic losses from climate variability and extremes. To be effective and to harmonize measures to address loss and damage with adaptation, it is essential to align adaptation incentives with prevention and risk reduction.

One of the common challenges for countries in implementing disaster risk reduction is that it competes for funding with development projects, or other national priorities (Kunreuther 2006). One of the recommendations for COP18 from the SBI Work Program on Loss and Damage may be to outline alternatives for easing this dilemma, such as by providing appropriate support to vulnerable countries to set these disaster risk reduction plans into motion. There is a case for creating frameworks or institutions that more closely link risk reduction and complementary measures like early warning, insurance, reconstruction, urban planning, management of human mobility related to environmental change, water management, etc. The SBI Work Program can catalyze efforts to more systematically consider risk reduction in adaptation approaches.

The three areas suggested above could be taken in any order that Parties desire. However, a logical sequence could be to first characterize exposure ("what is the area that requires addressing?"), second discuss the relevant range of instruments, and third discuss implementation options for each work stream.

Work Program on Loss and Damage Beyond COP18: Ongoing process of knowledge transfer on loss and damage to facilitate implementation.

Up until and beyond COP18, the Work Program will represent an ongoing process of knowledge accumulation and transfer to support better understanding of loss and damage issues. The Work Program will provide an ongoing channel to bring relevant expertise about the management and reduction of loss and damage to Parties, and to collect information and experience gathered in the implementation of approaches to manage and reduce loss and damage, including risk reduction and insurance measures in various areas of the world.

The timing of discussions for some issues, particularly longer-term issues such as the social and economic dimensions of foreseeable longer-term processes like sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification, etc. may require different paces. For example, Parties may need more time to work through issues like exposure, assessment, and ranges of options for managing loss and damage associated with longer-term foreseeable processes.

The articulation of approaches to manage loss and damage for longer-term issues may be in an early stage. For example, the processes mentioned above could have implications for population distribution, migration, displacement, and planned relocation in the distant future. Yet it will likely take a process of gathering evidence over time, building dialogue (as outlined in para 14(f)), exploring policy implications, and possibly building a multi-stakeholder process for identifying guiding principles to shape thinking about human mobility in the context of climate adaptation. These approaches will require more time than the months leading up to COP18 to explore. The process should be designed in a way to allow Parties sufficient time to build a common framework

of understanding, upon which sustainable implementation options at the appropriate time in the future may be built.

In summary, if Parties so wished, they may choose for some Work stream discussions to advance at a more rapid pace (from “problem”, to range of solutions, to implementation options) while others may require a slower, more in-depth pace to allow sufficient consideration of the issues at hand. The SBI Work Program on Loss and Damage should support Party discussions on an ongoing basis, in part for the reason that some areas (possibly such as longer-term foreseeable loss and damage) may require time beyond COP18 to consider implementation options. Regardless of the timing, the process should be designed so that implementation efforts both under the Convention, and outside of but in harmony with the Convention, can be undertaken to address loss and damage in the context of climate change.

5. Complementary activities to the Work Program on Loss and Damage

- **IPCC Special Report on Extreme Events**. Make special note of the findings of the IPCC SREX, and consider having the synthesis document presented in a special workshop or side event during an appropriate SBSTA or LCA meeting, or complementary to the UNFCCC climate negotiations. Ensure that Parties receive a synthesis for policy makers in a timely manner. This could be complemented by a briefing of scientists / lead authors of the SREX.
- **SBSTA:** Submissions invited from relevant organizations about the scientific basis and questions related to loss and damage in particular regions, ecosystem types, etc. to provide a comprehensive view of the kinds of issues countries face related to loss and damage. To facilitate timely provision of such contributions, a Work Program annex could make suggestions about specific questions that require addressing and the relevant time periods when such papers would be needed to inform SBI and SBSTA discussions. Part of this would be formal and part of this, if appropriate and agreed by the Chairs of SBI and SBSTA and the UNFCCC, would be informal consultations by the Chairs. **Nairobi Work Program:** Invite specific inputs and pledges from (especially scientific) organizations related to loss and damage (in NWP work streams on risk management, insurance, adaptation, etc.). Similar to the point on SBSTA, an annex in the Work Program could make suggestions about specific questions, areas where feedback about lessons learned would be needed, and possible complementary NWP activities such as NWP workshops could be useful.
- **UNU volunteers to co-organize a series of training workshops** to support delegates in familiarizing themselves with technical terms, different ways of addressing loss and damage, etc. together with other relevant stakeholder organizations. These training sessions could be organized as desired immediately before sessions or relevant SBI Work Program workshops to capitalize on participants´ time.
- **UNU volunteers to co-organize a workshop** on a relevant theme, as appropriate and desired by Parties.
- **UNISDR Global Platform (May 2011) and Global Assessment Report:** UNISDR´s Global Platform and the upcoming Global Assessment Report will provide useful information for SBI discussions, particularly about the nature of asset and other value exposure to extreme

weather events (Work Streams 1 and 2) and to a range of approaches that can help manage potential loss and damage from extreme weather events. Emphasis on risk reduction options and the avoidance of loss and damage are of particular importance. It would be helpful if Parties could note these elements/sources of information in the SBI Work Program on Loss and Damage.

6. Conclusions

The topic of loss and damage has advanced substantially from Bali onwards. The SBI Work Program has the opportunity to further foster confidence in the process as one that helps create solutions to some of the shared challenges of climate change. The work program should be designed with enough flexibility that Parties and relevant stakeholder observers will have both the chance for sufficient transfer of information, as well as moving forward even without perfect certainty in all areas. Measured progress over time and the ability to design solutions that offer some benefits for all Parties will contribute to a positive dynamic both in the climate negotiations as well as in other arenas where implementation of solutions occurs[18].

The SBI Work Program on Loss and Damage should help Parties explore what combinations of tools could be used to address loss and damage at the micro, meso, and macro levels (with the primary aim to prevent and reduce loss and damage, and also to help share risks that cannot further be reduced). It would be helpful to explore the added benefits to adaptation of effective risk management. A range of tools may be used to address the temporal and spatial dimensions of climate-related risks. The process should not expect to find one silver bullet solution; rather, the SBI Work Program should look for combinations of tools that can be implemented at different levels, both under the Convention and outside of (but complementary to) the Convention. This will be as much a time of discussion and preparation for a decision about implementation under the Convention, as it will be in catalyzing experiments, pilot approaches, and learning on the ground.

[18] It would be useful if the Work Program had a modality for updating information on an ongoing basis, providing inputs on ongoing implementation activities and feeding back lessons learned outside of the UNFCCC process.

Paper no. 31: World Bank

World Bank Submission in Support of the Work Program on Loss and Damage under Enhanced Action on Adaptation

1. Decision XX/CP.16 under para. 26 calls to establish a work program to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change. Parties and relevant organizations are requested to provide views and information on elements to be included in the work program, including the following:

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events
(b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification
(c) Approaches for addressing rehabilitation measures associated with slow onset events
(d) Engagement of stakeholders with relevant specialized expertise

2. The analytical, technical, and knowledge products of the Bank (and wider community) can inform the operations and delivery of programs and projects that mainstream climate change and risk management into the development process. Please find below a summary of key information that could contribute to the discussion on the work program on loss and damage under enhanced action on adaptation.

3. The World Bank's **Global Facility for Disaster Risk and Recovery (GFDRR) supports disaster risk management and is increasingly taking an integrated approach to risk management - which includes climate adaptation aspects.** Some relevant examples include:

(a) 31 Country Adaptation profiles (under development) are a first of a kind synthesis of climate adaptation profiles relevant to disaster response that are based on best available climate data. They are intended for fast and easy operational reference and will provide a basis from which practitioners can drill down for more refined information
(b) GFDRR supports country-specific climate risk financing solution(s) while offering technical support and convening services at both the country and local community levels. This work builds on the innovations of the Caribbean Catastrophic Risk Insurance Facility, Multi-Cat Program in Mexico, Catastrophic Draw Down Option (in several Latin American and Caribbean countries), and Weather derivative programs.

Information on the GFDRR's country and regional programs, knowledge products and analysis is available at: http://www.gfdrr.org/gfdrr/

4. **The Pilot Program for Climate Resilience (PPCR), under the Strategic Climate Fund, provides additional insights on climate risk, financing and resilience building, responding to elements (a) through (d) of the COP decision.** A strategic program and investment plan has been approved in three single pilot countries (Bangladesh, Niger and Tajikistan) to date. Plans for the remaining countries in the PPCR program (6 single country and 2 regional programs in the Caribbean and Pacific) are anticipated to be approved before the end of 2011. These strategies and their investments will provide an opportunity to learn and showcase various applications of climate resilience - including risk management and insurance. Further information of the PPCR can be accessed at:
http://www.climateinvestmentfunds.org/cif/workingdocuments/1962

5. **The World Bank has further supported analytical work that is relevant to resilience building, economic diversification and rehabilitation under elements (b) and (c) of the work program on loss and damage.** Some highlights are presented below.

i. ***Economics of Adaptation to Climate Change (2010)*** is based on case studies in seven developing countries. It estimates the cost of adaptation for developing countries at between $70 and $100 billion annually over the period to 2050. It concludes that economic development makes economies less reliant on climate sensitive sectors and additionally provides resources to minimize climate risk. However, countries need to develop differently to make their economies more climate resilient.

   Reference: *Economics of Adaptation to Climate Change Synthesis Report, 2010, The World Bank*

ii. ***Assessing the Potential Consequences of Climate Destabilization in Latin America (2009)*** seeks to estimate the multiple consequences of potential climate impacts - some of which can be monetized while others are beyond the reach of standard economic tools. This report summarizes data on some of the damages induced by climate destabilization based on the portfolio of adaptation activities in the World Bank's Latin American region. This includes the impacts of hurricane intensification, glacier retreat, and increased exposure to tropical vector diseases, coral bleaching, and composite costs of climate change in the particularly vulnerable Caribbean Basin.

   Reference: *Assessing the Potential Consequences of Climate Destabilization in Latin America, Latin America and Caribbean Region Sustainable Development Working Paper 32, ed. by Walter Vergara, The World Bank*

iii. ***Convenient Solutions to an Inconvenient Truth: Ecosystem based approaches to climate change (2009)*** attempts to set out a compelling argument for including ecosystem-based approaches to mitigation and adaptation as a third and essential pillar in national strategies to address climate change. Ecosystem based strategies can offer cost-effective, proven and sustainable solutions contributing to, and complementing, other national and regional adaptation strategies. It discusses current efforts to address climate change that largely focus on reducing greenhouse gas emissions through cleaner energy strategies and on reducing the vulnerability of communities at risk through improved energy and water infrastructure.

   Reference: *Convenient Solutions to an Inconvenient Truth: EcoSystem-based Approaches to Climate Change, Environment Department, 2009, The World Bank*

iv. ***Biodiversity, Climate Change and Adaptation (2008)*** highlights projects and programs with biodiversity-climate change links such as projects that directly support biodiversity conservation in a range of natural habitats. Many of these habitats provide critical ecosystem services and can be an important buffer to climate change, providing low-cost options for adaptation and mitigation actions.

   Reference: *Biodiversity, Climate Change and Adaptation: Nature-Based Solutions from the World Bank Portfolio, 2008, The World Bank,*

v. ***Agricultural Development under a Changing Climate – Opportunities and Challenges for Adaptation (2009)*** discusses potential climate change impacts on agriculture. It examines the causes of climate vulnerability, identifies investments to better climate-proof agriculture and describes how current efforts to support sustainable agriculture practices can address climate risk management.

Reference: *Agricultural Development under a Changing Climate: Opportunities and Challenges for Adaptation y John Padgham, August 2009, Issue 1, The World Bank*

vi. ***Development and Climate Change: Stepping up Support to Developing Countries (2010)*** reports on the progress made by the World Bank Group on its Strategic Framework on Development and Climate Change in 2008. It can be accessed at:
http://siteresources.worldbank.org/INFOSHOP1/Resources/WDR4.pdf

vii. ***Natural Hazards, Unnatural Disasters - the Economics of Effective Prevention (2010)*** looks as disaster prevention, insurance and coping through an economic lens. Recognizing that lenses can distort as well as sharpen images the report draws from other disciplines: psychology, political science, nutrition science. It also examines how the intensities and frequencies of hazards in the coming decades will change with climate change, acknowledging all the limitations of data and science.

Reference: *Natural Hazards, UnNatural Disasters: The Economics of Effective Prevention, United Nations & The World Bank, 2010, The World Bank.*

viii. ***Social Dimensions of Climate Change*** looks at pro-poor adaptation, local institutions, gender, and migration among other issues. It can be accessed at:
http://publications.worldbank.org/index.php?main_page=product_info&products_id=23596

Paper no. 32: World Meteorological Organization

WMO Submission for the Work Programme on addressing the loss and damage associated with climate change impacts in developing countries*

As per the decision of COP-16 session of the UNFCCC, I am pleased to send you herewith WMO's submission for the Work Programme on addressing the loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change.

As you will note, we have listed a number of workshops and expert meetings as well as technical papers and knowledge management products for the four suggested elements in the proposed work programme for 2011 and 2012.

Given the importance of this work programme for the developing countries that are vulnerable to the impacts of climate change, I suggest that while preparing the synthesis report for consideration by the Subsidiary Body for Implementation, the UNFCCC Secretariat may include another important element entitled **"Improved Climate Services for developing countries to provide better climate information and forecast products to facilitate early action to limit the loss and damage caused by climate change"** besides the four elements already listed for the work programme.

My suggestion to add this additional element is based on the decision by the World Climate Conference-3 (WCC-3) to establish a Global Framework for Climate Services (GFCS) to strengthen the production, availability, delivery and application of climate monitoring and prediction services. Indeed the decision of WCC-3 to establish a GFCS defined the directions towards “better climate information for a better future” in order to accelerate global action on adaptation and management of climate-related risks while capitalizing on the associated opportunities. The overall objective of the Framework is to “Enable better management of climate risks due to climate variability and change and adaptation to climate change at all levels, through development and incorporation of science based climate information and prediction into planning, policy and practice.”

The report of the High Level Task Force on GFCS is expected to be formally adopted by the WMO Congress at its Sixteenth Session in Geneva in May this year. Following this, a detailed implementation plan for the GFCS will be developed by end of 2011. It will also be shared with all UN System partners since it will be a major cross-cutting initiative of the UN System Delivering as One in the area of climate.

If our suggestion to add the additional element on improved climate services is acceptable to you, we will be happy to provide a detailed submission that includes workshops and expert meetings as well as technical papers and knowledge management products under this element. However, I can already indicate that it would include activities directed towards the five components of GFCS ie, Observations and Monitoring; Research, Modelling and Prediction; Climate Services Information System; User Interface Platform and Capacity Building.

* Submitted by way of a letter from Mr. M. Jarraud, Secretary-General of the World Meteorological Organization.

UNFCCC Work Programme in order to consider approaches to address loss and damage associated with climate change impacts in developing countries

Submission from the World Meteorological Organization

Workshops and Expert Meetings for Element 1: Possible Development of a climate risk insurance facility to address impacts associated with severe weather events

Title of the Workshop/Expert Meeting	Specific Objective	Focus (Global/Regional)	To be organized in
Requirements of Catastrophe and Weather-Indexed Insurance Markets for Meteorological, Hydrological and Climate Services	Identification of requirements, criteria for good practices in service delivery and identification of good practices around the world	Global	2012
Training Workshop on Meteorological, Hydrological and Climate Services to support Catastrophe and Weather indexed insurance Markets	Training materials developed based on Good practices	Caribbean and Central America South east Europe South east Asia	2013 2013 2013
Meetings of World Climate Research Programme (WCRP) experts in climate modelling, data analysis, etc and scientists from the region with knowledge of local climate to determine best available climate information (regional climate projections, observed time series data, etc) to estimate risk associated with climate variability and change	Identify available climate information for a region and best practices in use of this information in estimating risk. Create a network of researchers, practitioners and stakeholders to assist countries in estimating risk on a operational basis.	Regional – first workshop in West Africa. Second workshop in Latin America	2012 2013

Technical papers, Knowledge Management Products for Element 1: Possible Development of a climate risk insurance facility to address impacts associated with severe weather events

Title	Proposed Contents	Focus (Global/Regional	To be published in
Documentation of good practices in Delivery of Meteorological, Hydrological and Climate information and Services for Catastrophe and Weather-Indexed Insurance markets	Insurance/reinsurance and derivatives markets in a number of developed and developing countries and regional insurance facilities are being well serviced by Meteorological, Hydrological and Climate Services in a number of Sectors (Agriculture, property and casualty, government). The objective is to systematically document these cases and synthesize to develop guidelines	Global	2012-2013

Workshops and Expert Meetings for Element 2: Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification

Title of the Workshop/Expert Meeting	Specific Objective	Focus (Global/Regional)	To be organized in
Multi-Hazard Early warning Systems Training Workshops: With focus on institutional Coordination and Hydro-meteorological and climate related Hazards For model see: http://www.wmo.int/pages/prog/drr/events/MHEWSCostaRica/index_en.html	Targeted at Directors of agencies involved in EWS, based on training and guidelines developed from 11 document good practices in Early Warning Systems 1. Participants will benefit from exchanging experiences with experts of other countries and active discussions conducted according to a systematic approach to EWS 2. A document will be developed highlighting priorities of action for national Early Warning Systems (EWS) development cooperation for the region and concrete areas for regional cooperation	South east Asia South east Europe Southern Africa	2012 2012 2013
Expert Group Meeting on Hydrological Drought Indices	Develop Guidelines for Hydrological Drought Indices	Global	2011
Regional Workshops on the Assessment of Natural Disaster Impacts in Agriculture (ANADIA)	To assist countries in providing better information on the Assessment of Natural Disaster Impacts in Agriculture	Regional (Africa)	2012
Expert meeting on Extended Hydrological Prediction	To develop methodologies for extended hydrological predictions based on extended weather forecasts and climate outlooks	Global	2011
Exploratory meeting to identify methodologies and tools for establishment of standardized documentation and archival of loss and damages associated climate and weather impacts.	1- To meet requirements under sub-para. (g), Article 4 of the Convention regarding causes, effects, magnitude and timing of climate change and the economic and social consequences. 2- To meet requirements under the Nairobi Work Programme work area of 'Economic Diversification', as contained in the annex to decision 2/CP. 11 to advance development and dissemination of measures, methodologies and tools aimed at increasing economic resilience and reducing reliance on vulnerable sectors.	National/ regional/ global	2011- 2012

Expert meeting on direct and indirect impact of extreme weather and climate events on human health towards resilience building	Develop guidance and build a multidisciplinary network to assist countries in building resilience through an integrated approach on climate risk management for the health sector	East Africa	2013
Expert meeting on developing a space-based architecture for climate monitoring	Leverage the end-to-end system that has been implemented for weather observations, analysis, modeling and forecasting, so that climate observations can be both sustained and coordinated globally into the future.	Global	2012

Technical papers, Knowledge Management Products for Element 2: Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification

Title	Proposed Contents	Focus (Global/Regional	To be published in
Guidelines on Flood Hazard mapping	Guidelines will help countries establish a multi-stakeholder mechanism to develop flood hazard maps for flood risk assessments and management	Global	2011
Climate Prediction and Agriculture	Summary of successful case studies on applying seasonal climate forecasts to the agricultural sector	Global	2011
Guidelines for Agricultural Drought Indices	Guidelines to all organizations dealing with drought management strategies on which agricultural drought indices to use	Global	2011
Guidelines for Hydrological Drought Indices	Guidelines to all organizations dealing with drought management strategies on n which hydrological drought indices to use	Global	2012

Workshops and Expert Meetings for Element 3: Approaches for addressing rehabilitation measures associated with slow onset events

Title of the Workshop/Expert Meeting	Specific Objective	Focus (Global/Regional)	To be organized in
Regional workshops, coordinated through the Global Framework for Climate Services organized through the Research, Modelling and Prediction Management Committee.	To focus research and development activities on improving the climate services routinely available, and globally accessible, that will assist those threatened by slow onset disasters to recognize the symptoms of their development and take appropriate risk minimization / adaptation responses	Regional	2012 and beyond
Regional Workshop on Climate Change and Food Security in ASEAN+3	To assess the impacts of climate change on agriculture, forestry, fishery and land and water resource management in the Region; analyze Implications for food security and livelihoods in major agro-ecosystems; and identify priority areas and proper mechanisms for regional coordination & cooperation.	East and Southeast Asia	2011
Expert Team on the User Response to Climate Variability and Climate Change: Adaptation to Changing Climate at the Regional Level	To review and assess the response of agricultural communities to climate change, in order to improve their capacity to cope with climate change; To review the integrated methodologies for the assessment of impacts, vulnerabilities and adaptation measures in order to develop the capacity of agricultural communities to cope with climate change/variability and risks management in agriculture.	Global	2011
International Workshop on Climate and Oceanic Fisheries	To review the current understanding and status of marine and oceanic climate and climate variability, in particular in the South Pacific To evaluate of the impact of 21st century climate change on oceanic fisheries	Global/Pacific	2011
Regional Workshop on Climate Change Adaptation for Agriculture	To assess the impacts of climate change on agriculture and water resource management in the Region; analyze	Regional (South West Asia and	2011

in Near East and North Africa	Implications for food security and livelihoods in major agro-ecosystems; and identify priority areas and proper mechanisms for regional coordination & cooperation.	North Africa)	
Expert meeting on the establishment of high quality climate data sets and related management systems	Provide recommendations on the implementation of a high quality and sustained climate data management system for global and regional climate system monitoring	Global and regional	2012
3 Regional Workshops (1week each) on Climate Data Rescue	Improve scientific and technological foundations of climate data to support climate change adaptation in developing and least developed countries	- Mediterranean Basin - Southern Africa - The Caribbean	2012 2012 2013
International Workshop on Climate Change Detection and Indices	Set up new path for developing useful and simple but high significance indices for detecting long term climate variability and change in the most vulnerable regions	Global	2012
Establishment of Regional Networks of institutions on climate change and food security	Through various regional workshops there will be development of proposals for establishing regional networks	- West Africa - South Asia - Southeast Asia - Near East and North Africa	2012 2012 2013 2013

Technical papers, Knowledge Management Products for Element 3: Approaches for addressing rehabilitation measures associated with slow onset events

Title	Proposed Contents	Focus (Global/Regional	To be published in
Proceedings of the Regional Workshop on Climate Change and Food Security in ASEAN+3	Papers reviewing the impacts of climate change on agriculture in East and Southeast Asia along with a review of potential adaptation and mitigation strategies	Regional	2012
Proceedings of the International Workshop on Climate and Oceanic Fisheries	Papers reviewing the current understanding and status of marine and oceanic climate and climate variability and their impacts on oceanic fisheries	Global	2012
Guidelines on best practices for the implementation, and use of modern climate data management systems	Provide guidance to developing countries on modern climate data archiving systems and their implementation within the national meteorological services	Global	2013
Peer reviewed International Publication on the outcome of the international workshop on climate change detection and indices	Provide an authoritative advise and recommendations to help better assessing and detecting climate change at global, regional and sub-regional scale	Global and regional	2013
Assessment of regional sea-level change and coastal impacts	Projections, based on latest scientific knowledge, of local sea level change and its impacts	Regional - Asia, with focus on megacities at risk	2012

Workshops and Expert Meetings for Element 4: Engagement of stakeholders with relevant specialized expertise

Title of the Workshop/Expert Meeting	Specific Objective	Focus (Global/Regional)	To be organized in
Workshops on standardization of Hazard Data, Meta data, hazard analysis in floods, droughts, and other hydro-meteorological Hazards to support sectoral risk assessment	Training experts from developing countries in maintenance of high quality databases and statistical Hazard analysis for drought and flood risk assessment	Regional/national (south east Europe) (Caribbean) (South East Asia)	2011 -2012
[**Under the Global Framework for Climate Services**]: Development of a User Platform on Climate, Food and Water: *A stakeholder dialogue on Climate Risk Management for the Agriculture/food securityand Water Management Sectors, including related Public Health aspects.* (to be co-sponsored by WMO, WCRP, the Global Environmental Change and Human Health (GECHH) project, and other relevant partners (TBD, but possibly including WHO, Global Water Partnership, World Food Programme, etc, and supported by the Joint Expert Group on climate, Food and Water.)	• To bring together the relevant stakeholders in the water, agriculture/ food security and health sectors, the regional climate information providers, modelers, applied climate research specialists and others at the forefront of designing, developing and operationally producing user-tailored climate knowledge products; • To identify the susceptibility of the Agriculture/food security, Water Resources and Public Health sectors to climate variability and change, and the inter-relationships between these sectors through the effects of climate variability and change; • To inform stakeholders of available climate information for risk management and obtain feedback from users on, inter alia, the utility of the available products; • To identify requirements for climate products and information for application in Climate Risk Management in these sectors and important gaps (i.e. priority tools, products and services that require improvement and/or full development); and • To establish a 'User Platform' of regional stakeholders including sectoral users, the climate information providers and the research and development communities. This activity would contribute to the User Interface Platform component of the GFCS, by providing the interdisciplinary network and facilitating the communications/dialogue on climate issues needed to achieve effective climate services.	Regional (sub-regions of Africa (potentially including one or more of Northern, Western/sub-Saharan Africa), Eastern Africa); Western Coast of South America; South Asia)	2012-2013

Workshops on benefits of improved cryospheric information, products and services for risk management related to water resources, agriculture and energy.	To identify available cryospheric information, products and services currently available and accessible; identify major gaps and priorities for improved observation, monitoring and analyses to meet identified regional needs; initiate collaborative regional contributions to the Global Cryosphere Watch, including establishment of a supersite(s) in the regions to support risk management associated with weather, climate and water.	Regional : western Asia, northern Africa; Third Pole (Himalya and Tibetan Plateau	2012-2013

Technical papers, Knowledge Management Products for Element 4: Engagement of stakeholders with relevant specialized expertise

Title	Proposed Contents	Focus (Global/Regional	To be published in
Expanding and sustaining Regional Climate Outlook Forums (RCOFs) within the Climate Services Information System component of the Global Framework for Climate Services	Guidance on best practices in RCOF operations through standardized methods, tools and products; Mechanisms to promote adherence to best practices in the existing as well as new RCOFs for optimizing their outputs; Expansion of RCOFs into new regions and nurturing them in the formative stages; Including regional climate change and vulnerability assessments as well as adaptation strategy development as integral components of RCOF operations	Regional (around the world)	2010-2013
Development and implementation of National Climate Outlook Forums (NCOFs) within the Climate Services Information System component of the Global Framework for Climate Services	Concept development and guidance material to organize NCOFs, including the methods and approaches; Capacity building in climate prediction and projection on the regional scale; Best practices for NMHSs	National (with global scope)	2010-2013

	in stakeholder engagement in producing and disseminating user-targeted climate information; Implementation of showcase projects on NCOFs in a range of developing country settings		
Development of National Climate User Platforms (NCUPs) in the implementation of GFCS	Concept development and guidance to organize NCUPs; Optimizing user interaction within the GFCS structures; Promoting common understanding on climate issues among all the climate-sensitive sectors; Training users in interpreting and using climate information and prediction products	National (with global scope)	2010-2013
User-focused Climate Outlook Forums in the implementation of GFCS	Concept development and guidance to organize user focused outlook forums in close liaison with RCOFs and NCOFs; Guidance on the use of standardized user-specific climate indices; Best practices in integrating probabilistic climate information along with other user-relevant factors in decision making; Providing user feedback to climate service providers;	Global, Regional and National	2010-2013