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

Fifth session

Bonn, 29 March to 8 April 2009

Item 3 (a–e) of the provisional agenda

Enabling the full, effective and sustained implementation of the Convention through long-term cooperative action now, up to and beyond 2012, by addressing, inter alia:

A shared vision for long-term cooperative action

Enhanced national/international action on mitigation of climate change

Enhanced action on adaptation

Enhanced action on technology development and transfer to support action on mitigation and adaptation

Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation

**Summary of views expressed during the fourth session of the Ad Hoc
Working Group on Long-term Cooperative Action under the Convention**

Note by the Chair*

Summary

The fourth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) was held in Poznan, Poland, from 1 to 10 December 2008. At that session, Parties considered all the elements of paragraph 1 of decision 1/CP.13 (the Bali Action Plan): a shared vision for long-term cooperative action; enhanced national/international action on mitigation of climate change; enhanced action on adaptation; enhanced action on technology development and transfer to support action on mitigation and adaptation; and enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation. The AWG-LCA invited the Chair to prepare a summary of the views expressed in that session. This document is in response to that invitation.

* This document was submitted after the due date because there was insufficient time to finalize it.

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I. Introduction

A. Mandate

1. The fourth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) was held in Poznan, Poland, from 1 to 10 December 2008. During that session, Parties exchanged views, seeking progress on all the elements assigned to the AWG-LCA by decision 1/CP.13 (the Bali Action Plan).¹

2. The AWG-LCA, at its first session, invited its Chair to prepare a summary of the views expressed at each session. It also requested that the Chair include in that summary the views expressed at the workshops held as part of its work programme.²

B. Scope of the note

3. The fourth session of the AWG-LCA covered the five elements contained in paragraph 1 of the Bali Action Plan.³

4. To progress in its work, the AWG-LCA established four contact groups on the following subjects:

- (a) A shared vision for long-term cooperative action;
- (b) Enhanced action on mitigation and its associated means of implementation;
- (c) Enhanced action on adaptation and its associated means of implementation;
- (d) Delivering on technology and financing, including consideration of institutional arrangements.

5. This summary is organized in relation to the themes addressed by the four contact groups in order to best reflect the context of the exchange of views.

6. As with the preceding summary, this summary builds on the exchange of views at previous sessions of the AWG-LCA⁴ but focuses on progress made in the fourth session. In particular, it reports on additional clarity arising from the debate and on new developments. The summary does not include comments on the document prepared by the Chair to assemble ideas and proposals on paragraph 1 of the Bali Action Plan (hereinafter referred to as the assembly document) or its revision.⁵

II. Chair's summary

A. A shared vision for long-term cooperative action

7. The consideration of a shared vision for long-term cooperative action was facilitated by a workshop on this subject, held in Poznan on 2–3 December.⁶ Building on the exchange of views at the workshop,⁷ Parties focused their consideration on the guiding principles, scope and objectives of a shared

¹ FCCC/AWGLCA/2008/17.

² FCCC/AWGLCA/2008/3, paragraph 26.

³ Parties also considered the work programme for 2009 and the report to the fourteenth session of the Conference of the Parties on progress made (FCCC/AWGLCA/2008/17, paras. 11–28).

⁴ FCCC/AWGLCA/2008/6, FCCC/AWGLCA/2008/11 and FCCC/AWGLCA/2008/13.

⁵ FCCC/AWGLCA/2008/16 and Rev.1.

⁶ <http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4666.php>.

⁷ The report of the workshop is contained in annex I to this document.

vision for long-term cooperative action. In their exchange of views, Parties signalled broad agreement with these principles, including in relation to a global long-term goal for emission reductions – though not in relation to its quantification.

8. Parties recognized that the provisions and principles of the Convention are the basis for a shared vision. In particular, Parties highlighted the principle of common but differentiated responsibilities and respective capabilities, the polluter pays principle, the precautionary principle, historical responsibility and the principle of equity. Some Parties pointed out that the principle of equity provides a frame for the application of the principle of common but differentiated responsibilities and respective capabilities, and that a sense of justice will be needed when analysing the implications of the different ideas and proposals regarding the Bali Action Plan.

9. In relation to the principles mentioned in paragraph 8 above and recognizing the urgent need to address climate change, Parties maintained that a shared vision for long-term cooperative action should be based on the most recent scientific information.

10. Parties noted that the scope of a shared vision for long-term cooperative action is given by the Convention, which is characterized as a framework convention. As such, the Convention provides a framework for integrating and implementing the elements of the Bali Action Plan. Thus the focus of a shared vision would be an enhanced implementation of the Convention through global efforts that respect the principle of common but differentiated responsibilities and respective capabilities, and national circumstances. In a similar vein, others saw the shared vision as a strategic approach or set of criteria for operationalizing the Bali Action Plan in an effective and efficient way. Some Parties recalled that the purpose of these considerations is to reach an agreed outcome and adopt a decision at the fifteenth meeting of the Conference of the Parties in Copenhagen.

11. Considering the above, some Parties reflected on what it would take and what means of implementation would be necessary to achieve a full, effective and sustained implementation of the Convention. Some Parties pointed out, as captured in the words of one Party, that they “envision a long-term goal which successfully integrates the means of implementation needed to support mitigation and adaptation actions, delivered through a coherent approach and based on best available scientific information.”

12. The Chair of the contact group recalled the following exchange of views at the workshop:

“a shared vision for long-term cooperative action could provide guidance on the scale of finance and investment needed. Enhanced action on the provision of finance demands predictable, new and additional funding, to which the most vulnerable countries are given simplified and prioritized access. Coherent and coordinated institutional arrangements will be needed to optimize and mobilize investment and financial flows and deliver financing efficiently, effectively and equitably. Many Parties requested that institutional arrangements for the delivery of technology and financial resources be considered under the Convention and that financial and investment support be given on a concessional or grant basis. It was stressed that financial and investment support cannot depend mainly on markets”.⁸

13. Many Parties noted that the objective of a shared vision for long-term cooperative action and, as such, of the Convention is to bring about sustainable and climate-resilient development that combines the right to promote sustainable development with the demands of dealing effectively with climate change. In this context, when expressing their views on a shared vision, many Parties converged to an idea of

⁸ FCCC/AWGLCA/2008/CRP.6, paragraph 14.

evolution, highlighting their aim for progress in sustainable development, per capita emissions rights, and capabilities and national circumstances.

14. Parties asserted that this renewed spirit of cooperation is intended to give all nations the opportunity to contribute to achieving the ultimate objective of the Convention.

B. Enhanced action on mitigation and its associated means of implementation

15. The consideration of enhanced action on mitigation and its associated means of implementation was focused on identifying areas of convergence, areas where further clarification is needed, and gaps that remain to be addressed.

16. Parties reiterated a converging view that global efforts to enhance mitigation actions are needed, and that developed countries need to assume a leading role, including by undertaking new quantified emission limitation and reduction targets as well as enhancing assistance to developing countries. Parties noted the importance of ensuring comparability of efforts among developed countries.

17. Parties further reiterated their views on the contribution of different groups of countries to the overall mitigation effort envisaged in the Convention, taking into account the principle of common but differentiated responsibilities and respective capabilities. On the one hand, some Parties stressed that substantial deviation by developing countries from their baseline emissions should be part of an adequate global mitigation effort. Emphasizing that the economic situation of some developing countries has improved since 1990, some Parties reiterated proposals to differentiate actions and/or commitments by different groups of Parties on the basis of their economic growth, which would involve a mechanism for graduation from one group to another and special treatment for least developing countries (LDCs) and small island developing states (SIDS). Under such proposals, no commitments should be imposed on LDCs and SIDS; rather, they should be assisted in achieving sustainable development.

18. On the other hand, several Parties argued strongly that owing to the obligations established by the Convention and the historical responsibility of developed country Parties for current and future global warming, the present differentiation arrangements among developed and developing countries should remain in place. These Parties further stressed that any attempt to differentiate within the group of developing countries would exceed the mandate of the AWG-LCA. They pointed out that under Article 4, paragraph 7, of the Convention, support provided by developed countries is a prerequisite for actions to be taken by developing countries.

19. Some Parties proposed focusing on what is “nationally appropriate” with regard to mitigation actions as a way to stimulate the engagement of developing countries. In this regard, several Parties noted the importance of national circumstances, including those that limit opportunities for fuel switching or the introduction of renewable energy sources, or those governing priorities for mitigation in certain sectors. Several Parties noted the importance of mitigation actions related to land use, land-use change and forestry and to reducing emissions from deforestation and forest degradation in developing countries, as well as mitigation in the agricultural sector. Some Parties reiterated the importance of considering possible impacts as well as adverse effects of mitigation actions.

20. In order to define the nature of the nationally appropriate mitigation actions (NAMAs), one Party suggested using the concept of mitigation actions as referred to in Article 4, paragraph 1(b), and Article 12 of the Convention. It was noted that a mechanism to provide incentives for action by developing countries is needed. One Party suggested that while the nature of actions should be different for developing and developed countries, there is a need to join actions by developing countries with support and emission targets by developed countries. Furthermore, science should inform the setting of a global target.

21. On measurement, reporting and verification, Parties reiterated that this concept should cover both mitigation actions and commitments by developed countries, and actions by developing countries and support for those actions. The discussions indicated a convergence of ideas in a number of areas, as summarized in paragraphs 22–26 below.

22. Many Parties supported the idea of establishing a registry of NAMAs for developing countries. Parties noted that such a registry would be consistent with Article 12, paragraph 4, of the Convention. The aim of the registry would be to recognize mitigation actions by developing countries, link mitigation action with support, and ensure that both mitigation and support actions are measured, reported and verified. Parties suggested that such a registry should be organized under the auspices of the secretariat.

23. Parties further explored the practicalities of this proposal, including whether registered actions should include all actions from developing countries or only the subset supported by international funding; whether reporting of actions would be voluntary or mandatory; who would enter information and how often; and how the registry should incorporate sectoral approaches. Some Parties noted that such a registry should focus on measuring outcomes and co-benefits of action, rather than the process, and suggested that indicators should be developed to measure energy intensity and thus measuring “performance” of mitigation and support.

24. Another Party suggested that the registry should include actions in both developing and developed countries.

25. One Party suggested an alternative means of establishing a new mechanism under the Convention. This would comprise a commitment of resources from developed countries on the one hand and a pledge for action from the developing country on the other, as well as a method to map both action and support. This would be complemented with a measurement, reporting and verification process. Stand-alone actions under this mechanism could be included in the mechanisms through credits or another market-based mechanism.

26. Several Parties noted that it is important to have accurate, comprehensive and reliable greenhouse gas (GHG) inventory data as well as data on the actions that have been implemented in order to provide better accountability and recognition of mitigation efforts and of the support given to it. Some Parties mentioned that regular and frequent reporting would be essential for the effective functioning of the registry or any other system to report, measure and verify, and in particular to ensure recognition of the mitigation efforts undertaken by developing countries. Many Parties highlighted that the current system that is based on regular reporting of national GHG inventories and national communications provides a sound basis for a future system used to measure, report and verify. It was suggested by a number of Parties that requirements for measuring, reporting and verifying should be the same or similar for all Parties. One Party stated that requirements for measuring, reporting and verifying should not imply the introduction of a review process for developing countries.

C. Enhanced action on adaptation and its associated means of implementation

27. The consideration of enhanced action on adaptation and its associated means of implementation was facilitated by a workshop on risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance, held in Poznan on 4 December.⁹ The discussions followed the structure of the assembly document, which incorporates the elements of the Bali Action Plan and the four sub-elements that have evolved during the year:

- (a) Formulating and implementing adaptation plans;
- (b) Risk reduction and management, as well as insurance-related mechanisms;

⁹ The report of the workshop is contained in annex II to this document.

- (c) Creating enabling environments and incentivizing adaptation, including through economic diversification and knowledge sharing;
- (d) Employing financial resources and technology.

28. Many Parties highlighted principles that provide the context for the discussions on adaptation. One is the importance of underlining that climate change is an additional burden to development, and another is the urgent need for adaptation. Particularly vulnerable groups were discussed; women, children and the poor were said to be among the most disproportionately affected.

29. In terms of adaptation planning and implementation, Parties have consistently recognized that adaptation and development are closely interlinked. However, the discussions in Poznan clarified certain issues as priorities. The need for adaptation interventions to address the additional burden of climate change on development was one such priority raised. Another was the proposal that adaptation could also be effected through stand-alone interventions separate from, but complementary to, national programmes. The need to prioritize and tailor adaptation activities was generally accepted, and “country-driven adaptation” emerged as a priority for many Parties. The intrinsic link between sustainable development and adaptation is clear in the need expressed by Parties for integration of adaptation considerations into development plans at the national and sectoral levels, with Parties proposing that adaptation planning be undertaken programmatically, by national governments, as part of broader development strategies.

30. Some Parties expressed the view that developing country Parties should take a more comprehensive, long-term approach to adaptation, and not only address urgent and immediate needs, as was the case in the existing national adaptation programmes of action (NAPAs). At the same time, the need to continue and enhance the implementation of NAPAs was also mentioned, with some Parties suggesting that these, as well as other adaptation projects, should form part of national-level adaptation planning. Considerable progress was made on this issue during 2008, with many Parties linking national adaptation planning with the need for an overarching national-level framework for adaptation. Different ideas were raised on the structure and scope of the framework, but most Parties agreed that it should take into account all levels and sectors in terms of planning and channelling support for adaptation.

31. As at the previous three sessions, Parties stressed the need for streamlining and scaling up financial and technological support. Greater clarity on the additional costs of adaptation and what to fund was established during the fourth session. Parties also stressed, to a greater extent than at previous sessions, that capacity-building is a necessary requirement for the enhancement of adaptation. An increased number of Parties now refer to “support” as a term that encompasses not two, but three areas: financial support, technological support and capacity-building.

32. Among the numerous ideas put forward in the area of knowledge sharing, there was convergence on the need for synergy in all areas of adaptation. Many Parties emphasized the need to build experience and expertise under the Convention, such as within the Nairobi work programme on impacts, vulnerability and adaptation to climate change, and externally. Parties reiterated the important role that regional centres could play in the adaptation process, with greater clarity emerging on how to deal with this issue. Some suggested that existing centres be strengthened, whereas others suggested that new centres be established.

33. Institutional arrangements were discussed, with a focus on building on existing work being done under the Convention, within the United Nations system, and by other stakeholders. There was increased emphasis on the need for synergy with the Hyogo Framework for Action.

34. Parties discussed, in greater depth than at previous sessions, issues relating to risk management/reduction jointly with issues related to disaster reduction, in the context of their link to sustainable development. A mechanism was proposed to deal with risk consisting of insurance, a rehabilitation and/or compensation component, and a risk management component. This mechanism was

also discussed in greater depth than at previous sessions. It was suggested that the mechanism could be created under the Convention and supported by technical advisory and financial facilities, with links to existing technical bodies and financial instruments both within the UNFCCC process and externally.

35. Economic diversification was also highlighted as an integral component of adaptation planning and implementation, particularly in countries dependent on climate-sensitive economic activities.

36. In terms of the catalytic role of the Convention, Parties reiterated that the UNFCCC process should remain central to the adaptation discourse, and that this role should span a comprehensive range of activities, including ensuring coherence, avoiding duplication of work, motivating other bodies to take action, and generating political momentum.

D. Delivering on technology and financing, including consideration of institutional arrangements

37. The exchange of views on delivering on technology and financing, including consideration of institutional arrangements, focused on the question of how to enhance delivery of technology and finance for mitigation and adaptation actions. Parties considered gaps in the provision of finance and technology, asking what is needed, what is not working, and what should be devised to make the provision of such resources possible. There was convergence that the issue is a crucial component of the agreed outcome at the fifteenth session of the Conference of the Parties (COP).

38. Considerations on delivery of technology and financing were facilitated by a workshop on cooperation on research and development of current, new and innovative technology, including win-win solutions, held in Poznan on 6 December.¹⁰ Parties were of the view that cooperation between developed and developing countries is needed at all stages of the technology development cycle. It was noted that current best available technologies are not fully diffused and that this should be addressed through targeted diffusion mechanisms.¹¹

39. Some Parties referred to comprehensive proposals already submitted on this matter that address many of the issues raised, including institutional arrangements for delivering technology. Some Parties stressed the need to strengthen institutional arrangements that are effective, flexible and innovative, and can deliver quickly.

40. Some Parties emphasized the limitations of the current technology framework, and suggested that capacity-building and training, information exchange and knowledge sharing programmes including regional innovation centres and networks are important and could form part of the agreed outcome in COP 15. Furthermore, it was highlighted that national mitigation plans and adaptation actions would need to include a technology dimension. In this regard, some proposals were characterized as tools for collaborative action between developed and developing country Parties.

41. On ways forward, some Parties indicated the need to focus work on engaging the private sector and research institutions, and on enhancing enabling environments for technology transfer. Some Parties highlighted the relevance to the AWG-LCA of ongoing work by the Expert Group on Technology Transfer. Other Parties underlined the need for a multilateral technology fund and links that could be established with measurable, reportable and verifiable support of actions, including compliance and performance criteria.

42. Parties expressed divergent views on intellectual property rights (IPRs) in the context of the Convention. Some Parties saw IPRs as a barrier to technology transfer and presented the following ideas to address this: funding mechanisms to buy IPRs, modifying national policies on the use of IPRs for publicly funded research and development, and learning from existing approaches undertaken in the

¹⁰ <http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4666.php>.

¹¹ The report of the workshop is contained in annex III to this document.

public health sector. Other Parties stressed the importance of IPRs in encouraging innovation in technology development and deployment, and noted that the cost related to IPRs is a small fraction of the overall cost of technologies. Parties noted the need to find a balance between rewarding innovators and greatly scaling up technology diffusion and transfer. The view was expressed that financial support for technology transfer should not be limited to buying IPRs but rather should cover the full costs of development, deployment and capacity-building needed to adapt a technology to local conditions.

43. Regarding the delivery of financing, some Parties stated that the overall financial architecture must be built on three principles: effectiveness, efficiency and equity.

44. As for the provision of financial support for mitigation and adaptation actions by developing countries, some Parties emphasized that this is an obligation under the Convention. A view was expressed that public financing from developed countries is needed to provide grant or concessional finance to support the incremental cost of activities that address climate change in developing countries. Moreover, while market mechanisms, such as the clean development mechanism, can play a role, they may not provide adequate financial resources. Grant or concessional finance was also identified as required to leverage private sector flows. In this context, many Parties called for consideration to be given to financial resources provided under the Convention as well as outside.

45. On the issue of mobilizing funding and investments, some Parties were of the view that innovative ideas, such as using certified emission reductions, can only supplement international public resources, and that it should be ensured that these ideas are compatible with the provisions and principles of the Convention. Some Parties indicated that the focus of the AWG-LCA negotiations should be on using existing mechanisms rather than discussing the generation of new and additional resources.

46. Regarding the generation of financial resources, some Parties were of the view that in order to create an effective and equitable financial mechanism, funding should be drawn from a range of sources. Some Parties drew attention to specific proposals that have already been submitted and requested analytical work on all submitted proposals, especially those that involve predetermined contributions.

47. Some Parties were of the view that contributions by Parties should be based on the principle of common but differentiated responsibilities and respective capabilities, and should be assessed according to a criterion such as gross domestic product or GHG emissions, whereas other Parties felt that contributions should be sought only from developed countries. Some Parties argued strongly for the need for predictability and transparency in the provision of resources.

48. On the issue of disbursement and allocation of financial resources, some Parties suggested that funding should be granted according to a strategic approach to address climate change as a means of ensuring cost-effectiveness. Some Parties stressed the need to ensure a mix of financing mechanisms tailored to different needs. Some Parties stated that funding should be provided for mitigation actions that are measurable, reportable and verifiable, based on deviation from business-as-usual emission trends. Some stated that financing for mitigation and innovative technology cooperation should be used to target specific barriers and to create enabling environments for private-sector investments.

49. Regarding the governance of financial resources, some Parties were of the view that governance should include equitable representation, be fair and balanced, and be clearly related to UNFCCC processes. It was noted by some that institutions should be effective and meet high fiduciary standards. Some Parties reiterated that existing institutions should be strengthened rather than establishing new institutions, whereas others stated that existing mechanisms and institutions have not worked.

50. A number of Parties noted the efforts by developed countries in raising resources to address the current financial crisis and stressed that climate change should be considered on an equal footing with the economic crisis.

51. In the overall context of delivering on technology and financing, some Parties stressed that financing issues should be addressed as a priority in order to avoid official development assistance being diverted to address climate change, as this situation is affecting the provision of resources for development and poverty eradication. A number of Parties highlighted that the proposals for the financial architecture discussed by the AWG-LCA need to be combined in order to create an architecture that delivers according to the principles outlined in the Convention.

Annex I

Report on the workshop on a shared vision for long-term cooperative action

Summary by the chair of the workshop

I. Introduction

1. The Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) agreed on its work programme for 2008 at its first session. The AWG-LCA also agreed that its work should be facilitated by workshops and other activities to clarify and deepen understanding of the elements contained in decision 1/CP.13 (the Bali Action Plan). The AWG-LCA, at the same session, requested the secretariat, under the guidance of the Chair and in consultation with Parties, to organize a workshop at its fourth session on “A shared vision for long-term cooperative action”.¹
2. The workshop was held in Poznan, Poland, on 2–3 December 2008, during the fourth session of the AWG-LCA, and was chaired by the Chair of the AWG-LCA, Mr. Luiz Alberto Figueiredo Machado. This note by the Chair summarizes the presentations, exchange of views and discussions by Parties at the workshop.
3. Presentations were made by the following 11 Parties: Argentina; Bahamas on behalf of the Alliance of Small Island States; Bangladesh on behalf of the least developed countries (LDCs); Brazil; France on behalf of the European Union; China; Ecuador on behalf of Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru and Uruguay; Ghana; Japan; India; and South Africa on behalf of the African Group. The workshop was open to all Parties and observers.
4. The presentations were followed by a general exchange of views during which Parties had the opportunity to clarify the ideas presented.

II. Summary of discussions

A. Guiding principles, scope and objectives of a shared vision for long-term cooperative action

5. In their presentations and throughout the exchange of views, Parties recognized the urgency of the need to address climate change and the value of a shared vision for long-term cooperative action to guide a global effort to achieve a full, effective and sustained implementation of the Convention now, up to and beyond 2012. The challenge ahead requires a renewed spirit of cooperation so that Parties, individually and collectively, can put the world on a pathway towards a low-carbon society.
6. In the light of Articles 2, 3 and 4 of the Convention, this renewed spirit of cooperation can bring about sustainable and climate-resilient development that combines the right to sustainable development with the demands of dealing effectively with climate change. Sustainable development was mentioned as part of the solution to climate change. Safeguarding the most vulnerable people and countries (LDCs and small island developing States) was seen as a priority. Where countries lack sufficient capacity to respond to the challenges of climate change, a sense of international solidarity is required to ensure that all have access to opportunities to acquire this capacity in a timely manner.
7. A shared vision for long-term cooperative action that achieves the ultimate objective of the Convention should provide a framework for integrating and implementing the four pillars of the Bali Action Plan. This should build on needs relating to mitigation and adaptation, guiding investment

¹ FCCC/AWGLCA/2008/3, paragraph 26.

decisions and driving innovation, encouraging new technology development and accelerating the deployment and diffusion of existing technologies.

8. Parties underlined the importance of several principles, including the principle of common but differentiated responsibilities and respective capabilities, the polluter pays principle, the precautionary principle, historical responsibility with a view towards the future and the principle of equity. Regarding equity, some Parties referred in particular to intergenerational equity, equal rights to common atmospheric resources, and per capita accumulative emission convergence. The need to base a shared vision for long-term cooperative action on the most recent scientific information was also highlighted.

B. A framework for implementing the elements of the Bali Action Plan

Enhanced national/international action on mitigation of climate change

9. Parties felt that a move towards a low-carbon society requires a reorientation of global economic growth patterns and a shift towards more sustainable production and consumption. This would necessitate innovative changes in technology, lifestyle and infrastructure that can only come about through the establishment of new policy frameworks and an increase and redirection of public and private investment, especially in the energy sector. Economic instruments will be needed for this reorientation of growth, although their implementation will need to include measures that go beyond the offsetting of emissions in one country through emission reductions in another.

10. Many Parties noted that leadership by developed countries is central to a shared vision that focuses on the implementation of the Bali Road Map and of the Convention and Kyoto Protocol, both now and as these instruments are carried into the future. Some Parties highlighted that developing countries also have a responsibility to take appropriate national actions that are measurable, reportable and verifiable within the framework of sustainable development. Support for their actions, provided on the same basis, should be provided by developed countries in the form of technology, finance and capacity development.

Enhanced action on adaptation

11. A shared vision for long-term cooperative action in the context of adaptation would require that adequate priority be given to adaptation needs, including the need to respond to impacts of climate change already occurring and the need to prepare for future impacts, in particular in relation to the most vulnerable countries. New and additional financing will be needed to address the additionality of the adaptation challenge over and above sustainable development, taking into account the principle of equity.

12. The need for a framework for action on adaptation was identified. This would lay out the range of actions to promote country-driven adaptation strategies, a structured but flexible approach, based on rigorous planning and predictable and adequate financing. The aim would be to strengthen national adaptive capacity and galvanize national and international support for adaptation priorities set to promote climate-resilient development.

Enhanced action on technology development and transfer to support action on mitigation and adaptation

13. In the context of a shared vision for long-term cooperative action and in order to achieve the ultimate objective of the Convention, an innovative approach to technology development, diffusion and transfer is needed. Meeting these objectives would require significant scaling up of international public funding, particularly in investment in research and development on climate-friendly technologies, and private-sector participation. Many Parties argued that an innovative intellectual property rights system and joint development of environmentally sound technologies would be necessary. Appropriate institutional arrangements, including promotion of public-private partnerships and North-South and South-South cooperation, should be supported.

Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation

14. A shared vision for long-term cooperative action could provide guidance on the scale of finance and investment needed. Enhanced action on the provision of finance demands predictable, new and additional funding, to which the most vulnerable countries are given simplified and prioritized access. Coherent and coordinated institutional arrangements will be needed to optimize and mobilize investment and financial flows and deliver financing efficiently, effectively and equitably. Many Parties requested that institutional arrangements for the delivery of technology and financial resources be considered under the Convention and that financial and investment support be given on a concessional or grant basis. It was stressed that financial and investment support cannot depend mainly on markets.

C. Long-term global goal for emission reductions

15. Parties felt that a long-term global goal for emission reductions should provide both the aspiration and yardstick for establishing concrete and measurable actions and goals in the medium term. The ultimate objective of the Convention should guide agreement on a long-term goal.

16. Some Parties stressed that deep cuts in global emissions would be needed after emissions peak, especially if the increase in global mean temperature is to be held at two degrees Celsius or below. An emissions goal should be based on sound science, as well as economic and technological feasibility. Many Parties argued that, by 2050, global greenhouse gases emissions should be cut by at least 50 per cent of either their 1990 levels or their current levels, with some Parties suggesting greater cuts of more than 85 per cent of 1990 levels.

17. Achieving a long-term global goal requires a global response, with all Parties taking action in line with their common but differentiated responsibilities and respective capabilities. Together with a recognition of past emissions, these responsibilities and capabilities mean that developed countries must lead global efforts to reduce emissions. It is important to ensure the comparability of efforts among developed countries. The emissions of developed countries need to be restricted to allow for equity in the sharing of the world's common atmospheric resources. Some Parties argued that developed countries should reduce their emissions by 80 per cent or by at least 95 per cent of 1990 levels by 2050, with a medium-term goal of reducing emissions by 25–40 per cent of 1990 levels by 2020.

18. Though their responsibilities differ from those of developed countries in terms of both intensity and legal nature, developing countries also need to take action, on the basis of support from developed countries, in order that their emissions significantly deviate from business as usual (BAU) projections. Some Parties argued that this deviation should amount to 15–30 per cent below BAU projections by 2020 while economic and social development, as well as poverty eradication, remain the overriding priorities of developing countries.

Annex II

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

I. Introduction

1. The Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) agreed on its work programme for 2008 at its first session. The AWG-LCA also agreed that its work should be facilitated by workshops and other activities to clarify and deepen understanding of the elements contained in decision 1/CP.13 (the Bali Action Plan). The AWG-LCA, at the same session, requested the secretariat, under the guidance of the Chair and in consultation with Parties, to organize a workshop at its fourth session on risk management and risk reduction strategies.¹

2. The workshop was held in Poznan, Poland, on 4 December 2008, during the fourth session of the AWG-LCA, and was chaired by Mr. Leon Charles (Grenada) on behalf of the Chair of the AWG-LCA. This note summarizes the presentations, exchange of views and discussions by Parties at the workshop. Three technical papers and an information note were prepared by the secretariat as inputs to the discussions in the workshop.²

3. Given the technical nature of the issues to be discussed, representatives of the secretariat of the United Nations International Strategy for Disaster Reduction (ISDR), the Informal Task Force on Climate Change of the Inter-Agency Standing Committee (IASC) and the Munich Climate Insurance Initiative (MCII) were invited to give overview presentations. Regional and national perspectives, lessons learned and further needs were presented by representatives of the Alliance of Small Island States (AOSIS), China, the European Union (EU), the least developed countries, Peru, the Philippines and Switzerland. A representative of the secretariat presented a summary of the technical papers and information note referred to in paragraph 2 above.

4. Delegates from the Bahamas, Bangladesh, Barbados, Canada, Cook Islands, Egypt, Honduras, Indonesia, Japan, Malawi, Nicaragua, Norway, Panama, Samoa, Sri Lanka, Togo, Tuvalu and the United States of America raised questions and made interventions. A representative of the Intergovernmental Panel on Climate Change (IPCC) informed delegates that a scoping meeting of the IPCC will be held in March 2009 in Norway to identify the objectives and content of a possible special report on risk management and strategies to adapt to risk from climate change related extreme events.

II. Summary of discussions

5. Discussions centred on: disaster risk reduction (DRR) as an integral part of a future climate change adaptation strategy; opportunities and challenges for linking DRR with climate change adaptation; the diverse mechanisms for risk sharing and risk transfer, including insurance; and barriers to, and further needs for, the development and scaling up of risk sharing and transfer mechanisms in the most vulnerable developing countries.

6. Parties reaffirmed that enhancing the resilience of vulnerable communities to climate change impacts through adaptation is an essential response to climate change, given the potential for socio-economic development to be impeded by considerable impacts of climate-related extreme events, particularly in vulnerable developing countries. Citing the disaster-prone nature of the geography of their

¹ FCCC/AWGLCA/2008/3, paragraph 26.

² FCCC/TP/2008/3, FCCC/TP/2008/4, FCCC/TP/2008/9 and FCCC/AWGLCA/2008/INF.2.

countries, and the increasing loss of assets, livelihoods and human life from climate-related natural disasters in recent decades, Parties reiterated the urgent need to enhance action on adaptation as part of the global response to climate change and its impacts.

7. Parties noted that the capacity and lessons learned from DRR institutions, policies and practices can be used to support adaptation. As jointly noted by ISDR and IASC and reiterated by Parties, given well-developed institutional frameworks, technical tools and practical experiences to manage weather and climate risks, DRR policies and practices can serve as an important basis for climate change adaptation. Indeed, national DRR strategies have been developed and implemented in some Parties (e.g. as presented by China, Peru, the Philippines and Switzerland). In particular, some of the important areas of action could be drawn from extensive national and international experience in implementing the Hyogo Framework for Action, which is aimed at building resilience to disasters. These areas include: national planning for adaptation; sector-specific risk reduction plans; risk assessments; early warning systems and emergency preparedness; risk-based economics and financing; and knowledge and tools development. Efforts are needed to enhance the integration of the work undertaken by the DRR and adaptation communities, as well as the integration of DRR and adaptation into national and sectoral plans and policies. This has been addressed, in some countries, by formally assigning DRR and adaptation to one ministry.

8. Parties consider that financial mechanisms, including insurance, have an important role within any future climate change adaptation agreement. A suite of financial mechanisms, including insurance, has emerged to allow developing countries to manage the substantial losses expected from climate-related disasters and extreme events, in line with their concurrent efforts to reduce poverty and adapt to climate change. In fact, different insurance tools have been piloted in developing countries: microinsurance in Bangladesh, Ethiopia, India, Malawi and Mongolia; national-level insurance schemes, such as Mexico's Fund for Natural Disasters (FONDEN); and regional insurance pools, such as the Caribbean Catastrophe Reinsurance Facility. It was noted that the feasibility and viability of different risk sharing and risk transferring options will depend on national and/or local circumstances and the nature of climate risks.

9. During the workshop, the representatives of AOSIS and MCII presented two possible frameworks for risk sharing and risk transfer.

10. AOSIS proposed a Multi-Window Mechanism to address loss and damage from climate change impacts. The mechanism consists of three components: insurance, rehabilitation or compensation, and risk management. The insurance component aims to address losses and damages from rapid onset climate-related extreme weather events such as hurricanes; the rehabilitation or compensatory component is directed towards loss and damage (e.g. land loss and coral bleaching) from progressive and cumulative adverse impacts such as sea level rise; and the risk management component promotes preventive action using risk assessment and risk management tools and strategies at all levels. These three components are supported by a technical advisory facility and a financial vehicle or facility; these were also elaborated for each of the three components, with inputs from, and links to, existing technical bodies and financial instruments within and beyond the UNFCCC process. It was proposed that a Multi-Window Mechanism Board be created under the Convention.

11. The Risk Management Framework described by MCII has two complementary pillars: prevention and insurance. Together, these two pillars address low, medium and high risk. MCII stressed the need, recognized by Parties, for funding for these two pillars, and suggested that the Conference of the Parties could identify a suitable operating entity and specify the operation of the two pillars. Parties made several interventions after the presentation, concerning the technical details of the premium estimates, funding mechanism and governance structure of the Risk Management Framework. MCII clarified that the estimated cost of establishing the framework does not include the cost of data sets, institutions and other elements that would be required to create the appropriate enabling conditions. The MCII proposal

does not specify the governance structure or the framework for a related funding mechanism; this could be decided on by the Parties.

12. The EU presented its proposed Framework for Action on Adaptation. This promotes the integration of adaptation actions into national and sectoral planning processes; generation of knowledge, information and capacity for the implementation of adaptation actions; adoption of risk management approaches; enhancement of adaptation technologies; provision of adequate and predictable financial flows to assist particularly vulnerable developing countries; mobilization and cooperation of relevant organizations; and monitoring and evaluation of adaptation action.

13. Although there was broad agreement to support risk sharing and risk transfer mechanisms, Parties highlighted challenges that hinder the development and scaling up of financial instruments in developing countries. As Malawi indicated, and as was supported by several other Parties, the smooth operation of most insurance schemes against losses arising from climate-related disasters and extreme events requires good historical, as well as real-time, weather observations. Owing to the lack of investment in infrastructure and technical capacity, high-quality weather data are often unavailable or difficult to access in many developing countries. In addition, financial instruments, including insurance, are still novel in many developing countries, and the technical capacity required to assess risks and fully understand the financial implications of these instruments is limited. Hence, considerable efforts are needed to improve the availability of access to and quality of relevant data and observations, to develop a wide range of methods and tools for risk assessment and management, and to enhance technical capacity for risk assessment and better understanding of the wide range of financial instruments. Further, vulnerable countries and communities often have very limited access to financial resources and need external assistance to be able to participate in insurance schemes.

III. Possible areas of focus

14. The workshop facilitated a constructive exchange of ideas, experiences and views on risk reduction strategies and the role of financial mechanisms for risk sharing and risk transfer. Successful examples of using financial instruments to manage current climate risks, and of how such instruments can be adapted and bundled to manage the additional risks of climate change, were presented.

15. Several areas of interest and convergence emerged during the discussions, which could be further considered by Parties. These include the following:

- (a) The development of enabling environments for implementing risk management and risk reduction strategies will be essential. This can be achieved through public-private partnerships; supportive regulatory frameworks; action to integrate climate risk reduction into national development planning and policies; policy frameworks for research, development and investment; and sharing of experience and information, including at the regional level;
- (b) Various financial mechanisms for risk sharing and risk transfer have the potential to stimulate preventive action, as well as to provide support for disaster relief and recovery. Options range from microinsurance for the most vulnerable communities to regional instruments that span several countries. However, financial instruments such as insurance are context-specific and their application needs to be based on careful consideration;
- (c) Developing, adopting and scaling up these financial mechanisms in developing countries is hampered by considerable gaps in data and technical capacity and a lack of financial resources. Support from the international community is required to address these barriers;

- (d) Joint schemes and international and regional coordination and cooperation should also be promoted, with a view to accelerating the uptake of financial mechanisms for risk sharing and risk transfer by vulnerable communities and countries.

Annex III

Report on the workshop on cooperation on research and development of current, new and innovative technology, including win-win solutions

Summary by the chair of the workshop

I. Introduction

1. The Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) agreed on its work programme for 2008 at its first session. The AWG-LCA also agreed that its work should be facilitated by workshops and other activities to clarify and deepen understanding of the elements contained in decision 1/CP.13 (the Bali Action Plan). At the same session, it requested the secretariat, under the guidance of the Chair of the AWG-LCA and in consultation with Parties, to organize a workshop at its fourth session on “Cooperation on research and development of current, new and innovative technology, including win-win solutions”.¹
2. The workshop was held in Poznan, Poland, on 6 December 2008, during the fourth session of the AWG-LCA, and was chaired by Mr. Kunihiro Shimada (Japan) on behalf of the Chair of the AWG-LCA, Mr. Luiz Alberto Figueiredo Machado (Brazil).
3. This note by the chair of the workshop summarizes the presentations, exchange of views and discussions by Parties at the workshop.
4. Presentations were given by the following 10 Parties: Australia, Bangladesh, China, France on behalf of the European Community (EC) and its member States, India, Japan, Norway, the Republic of Korea, the Philippines on behalf of the Group of 77 and China, and the United States of America. Following the presentations, two interventions were made by Canada and a representative of the Intergovernmental Panel on Climate Change (IPCC). The presentations were also followed by a general exchange of views during which Parties had the opportunity to clarify the ideas presented.

II. Summary of discussions

5. The Chair of the Expert Group on Technology Transfer (EGTT) set the scene for the discussions by presenting experiences and lessons learned from the group’s work relating to cooperation on research and development (R&D) of technology. He highlighted the role of public finance in the R&D stage and the role of private investment in the deployment and diffusion stages of the technology development cycle. Possible options for cooperation being explored by the EGTT include global pooling of R&D funds, coordinating existing R&D programmes, and increasing public investment and incentives for greater private investment in R&D. A representative of the IPCC mentioned that the IPCC is preparing a special report on renewable energy sources and climate change mitigation, to be completed by the end of 2010.
6. In their presentations, Parties stressed the key role of technology in addressing climate change and the need to scale up R&D of current, new and innovative technologies for both mitigation and adaptation; technology provides the means to close the gap between the need for economic growth and the reduction of emissions. Many Parties emphasized the importance of cooperation on technology R&D between developed and developing countries, involving both the public and the private sector. The accelerated development of key technologies could reduce the cost of stabilizing the concentration of greenhouse gas (GHG) emissions in the atmosphere by hundreds of billions of dollars globally.

¹ FCCC/AWGLCA/2008/3, paragraph 26.

7. Elaborating on the rationale and importance of cooperation on R&D between developed and developing countries, Parties were of the opinion that cooperation is needed in all stages of the technology development cycle. It was noted that current best available technologies are not fully diffused; this should be addressed through the targeted diffusion of these technologies and the invention of new technologies. Parties also mentioned the acceleration of innovation and development of technologies, cost reduction and the avoidance of duplication of R&D efforts as being among the benefits of international cooperation.

8. Some Parties highlighted their experiences and lessons learned from international technology R&D cooperation programmes and initiatives, at the national, bilateral and multilateral levels, such as the Global Carbon Capture and Storage Institute of Australia, the Asia-Pacific Partnership on Clean Development and Climate, the Carbon Sequestration Leadership Forum, the International Partnership for the Hydrogen Economy and the Methane to Markets Partnership. Many of these programmes and initiatives have a clear focus on specific sectors and/or technologies. It was suggested that any new initiatives should build on and complement these existing cooperative efforts. To realize the potential of technology development, deployment and cooperation, it is necessary to identify and focus on key technologies. Areas for further cooperation include: early warning systems and other observation tools, technologies for irrigation and flood and drought control (adaptation); and carbon capture and storage, solar power, biofuels, system integration of renewables, and energy efficiency in buildings, transportation and industry (mitigation).

9. It was noted that cooperation on technology at different levels will complement the work being carried out under the Convention. Priority areas for technology cooperation could include areas with major sources of GHG emissions and great potential for technological progress. Possible ways and means to achieve this cooperation include joint programmes, technology centres, demonstration projects and research infrastructure investments.

10. Parties noted that public and private R&D spending have been decreasing over recent decades. Several Parties stressed that the public sector has a crucial role to play in reversing this trend by using public R&D funding to leverage private investments in R&D and by providing incentives to the private sector to scale up its investment in R&D of environmentally sound technologies.

11. Parties highlighted the importance of supporting the development and enhancement of the endogenous capacities and technologies of developing countries, and the importance of building human and institutional capacity in developing countries through, inter alia, knowledge-sharing, training, strengthening the capacity of national centres of excellence and building up and linking national climate technology centres.

12. Many presentations focused on R&D for mitigation. Parties recognized the need for more opportunities for cooperation on R&D for adaptation and questioned how adaptation R&D could be addressed for the small island developing States in the absence of win-win solutions and market intervention. Parties also confirmed the urgent need to move towards low-carbon societies.

13. Parties emphasized the importance of creating enabling environments to remove barriers to scaling up cooperation on technology R&D, and the importance of well-developed national and international systems of innovation. Parties also raised questions on how to deal with the intellectual property rights (IPR) issues in the context of the discussions under the AWG-LCA. Some Parties stated that IPR issues could be a barrier to the development, deployment, diffusion and transfer of technology. Other Parties stated that costs related to IPR are not the main contributor to the overall costs of technologies.

14. Specific proposals presented in the workshop included:

- (a) To enhance R&D cooperation through:
 - (i) Ensuring R&D capacity-building via information-sharing platforms and increased networking, training and exchange, climate and technology policy support, and market assessment, linking and building-up national climate technology centres (EC);
 - (ii) Creating R&D-related technology-oriented agreements (TOAs), building on existing cooperation. These TOAs could formalize cooperation through international R&D programmes, focus on specific (groups of) technologies and help to develop and implement technology road maps and planning (EC);
 - (iii) Strengthening of national centres of excellence in the most vulnerable countries; establishment of regional and international centres; capacity-building for adoption of technology to cater for the needs of developing countries; effective collaboration among international, regional and national institutions and centres; generation and sharing of data and information; waiver of IPR in the transfer of environmentally sound technologies (Bangladesh);
- (b) To enhance policies for public R&D by (Republic of Korea):
 - (i) Integrating global environmental goals such as climate change and technology transfer into public R&D programmes;
 - (ii) Exploring the possibility of pooling, sharing and exchanging publicly funded environmentally sound technologies for mutual and global benefit;
 - (iii) Enhancing accessibility of public R&D programmes and promoting joint R&D activities with developing countries;
 - (iv) Building long-term partnerships for mutual and global benefit through publicly funded R&D with new public R&D policies;
- (c) To measure, report and verify the progress and success of R&D activities (EC);
- (d) To establish the following institutional arrangements for R&D:
 - (i) A network of climate technology development and diffusion centres aimed at addressing the diverse range of technology, business and regulatory barriers to the development and diffusion of a specific technology, involving technology developers, companies, regulators and policymakers. The activities of this network would include product development, development of appropriate business models and policy and market research/analysis to support regulatory and policy development. This network would report to the Conference of the Parties (India);
 - (ii) An advisory group for sectoral technology cooperation with representatives from the public and private sectors. This group could identify and focus on key technologies by the drawing of technology roadmaps containing a shared vision by industry, academia and government and would report to the Convention (Japan);

- (iii) A special panel in charge of R&D cooperation within a proposed subsidiary body for development and transfer of environmentally sound technologies (China);
- (e) To establish an international technology mechanism under the Convention for the development and transfer of environmentally sound technologies structured around the following three pillars (Group of 77 and China):
 - (i) A technology action plan to enhance action at all stages of the technology development cycle, including R&D, deployment, diffusion and transfer of technologies;
 - (ii) An institutional arrangement comprising an executive body, a strategic planning committee, expert panels and a verification group;
 - (iii) A multilateral climate technology fund established as part of the enhanced financial architecture of the Convention.

15. There was an active exchange of views among Parties on various proposals, including how an R&D specialized panel and a network of technology centres could work together or be integrated, how technology road maps could be linked with IPR matters to facilitate the development, deployment, diffusion and transfer of technologies, how to ensure that the result of technology R&D could be transferred to developing countries, and on elements of the technology action plan as proposed by the Group of 77 and China and how these would link to national action.

III. Possible areas of focus

16. Several areas of interest and convergence emerged during the discussions, which could be further considered by Parties, including:

- (a) **Cooperative action on R&D:** possible form and content of the proposed technology action plan, technology agreements, or technology road maps to scale up cooperation on R&D of key technologies and to reduce the global cost of mitigation and adaptation;
- (b) **Financing R&D:** ways and means to scale up financial support and international collaborative effort on technology R&D;
- (c) **Institutional arrangements:** roles or specific responsibilities, and status of the proposed institutional arrangements for coordinating R&D activities.
