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UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

AD HOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION UNDER THE CONVENTION
First session
Bangkok, 31 March to 4 April 2008

Item 3 of the provisional agenda
Development of a work programme

Views regarding the work programme of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention

Submissions from Parties

Addendum

1. In addition to the 26 submissions contained in document FCCC/AWGLCA/2008/MISC.1 and the three submissions contained in document FCCC/AWGLCA/2008/MISC.1/Add.1, two further submissions have been received.

2. In accordance with the procedure for miscellaneous documents, these submissions are attached and reproduced* in the language in which they were received and without formal editing.

* 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.

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PAPER NO. 1: AUSTRALIA

VIEWS ON THE WORK PROGRAMME FOR THE AD HOC WORKING GROUP ON LONG TERM COOPERATIVE ACTION

This submission provides the views of the Australian Government on the work programme for the Ad Hoc Working Group on Long Term Cooperative Action (AWG) in the UN Framework Convention on Climate Change (UNFCCC), taking into account the elements referred to in operative paragraph 1 of Decision 1/CP.13 (the Bali Action Plan).

Operative paragraph 1 of 1/CP.13 provides a mandate for the work of the AWG consisting of five, interrelated strands of work, namely 1 (a), 1 (b), 1 (c), 1 (d) and 1(e). Operative paragraph 2 of 1/CP.13 decided that the AWG shall complete its work in 2009 and present the outcome of its work to the Conference of Parties for adoption at its fifteenth session.

Australia places a high priority on the AWG fulfilling its mandate in an urgent and comprehensive manner so as to allow the Conference of Parties to forge a post-2012 multilateral outcome that sees all countries act further to mitigate and adapt to climate change in a manner that is equitable, and environmentally and economically effective.

It is important that the work of the AWG proceed in an urgent and effective fashion to allow the Conference of Parties to the Convention and the Conference of Parties serving as the Meeting of Parties to the Kyoto Protocol to act with confidence in addressing other work, in particular the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol.

The scope, complexity and interrelated nature of the work of the AWG are such that the work should be organised to consider elements from more than one strand at each session. As a minimum, each strand should be initially addressed by the AWG during the course of 2008 to allow the AWG to complete consideration of substantial outcomes under each work strand in 2009.

The Annex to 1/CP.13 sets out a timetable for four meetings of the AWG in 2008. Australia proposes that the following matters be addressed by each session of the AWG.

- **Session 1** (31 March-4 April 2008) should consider, and reach agreement on a detailed schedule of work for 2008, including a schedule for workshops and other activities.

- **Session 2** (2-13 June 2008) should give initial consideration to the technology and financing streams of work, specifically 1 (d) (i) (ii) (iii) (iv) and 1 (e) (i) (ii) (iii) (iv) (v) (vi).

- **Session 3** (August/September 2008) should meet for six working days and should give initial consideration to specific elements of the mitigation and adaptation streams of work, specifically 1 (b) (ii) (v) (vi) and (vii); and 1 (c) (i) (ii) (iii) (iv) (v).

- **Session 4** (1-12 December 2008) should give consideration to a shared vision for long-term cooperative action, including a long-term global goal for emissions reductions as specified in 1 (a), as well as give initial consideration of the remaining elements of the mitigation work stream, specifically 1 (b) (i) (iii) (iv). Session 4 should also consider, and

reach agreement, on a detailed work plan and schedule of work for 2009, including a schedule for any workshops and other activities.

Parties, and where relevant other multilateral bodies, the public and private sectors and civil society, should be asked to submit detailed views on the work for each session, allowing the Secretariat enough time to compile submissions for consideration by the group at the relevant session.

To assist Parties in the preparation of views and to facilitate the work of AWG sessions, Australia would welcome the Chair and the co-Chair of the AWG posing a series of relevant questions. For example, Session 3 could consider a question such as "How can mitigation actions by developing countries be best measured, reported and verified?", and Session 4 could consider a questions such as, "What constitutes comparable effort among developed countries?"

As decided in Operative Paragraph 3 of 1/CP.13, the work of the AWG should be complemented by workshops and other activities, particularly on more technical matters. Such complementary activities will facilitate the negotiating process.

Australia would welcome, and be willing to help support, the holding of a tailored workshop on 1(b)(iii) in the second half of 2008, in particular focusing on the overarching policy issues to guide ongoing methodological work relating to reducing emissions from deforestation and forest degradation in developing countries.

Other elements on which workshops would be considered useful to inform meaningful deliberations, and to promote the engagement of other multilateral bodies, the public and private sectors and civil society, include 1(b)(v) and 1(b)(vii). The workshops could draw out more detailed discussions if held for 4-5 days rather than the typical 2-3 days of UNFCCC workshops.

As agreed in Operative Paragraph 11 of 1/CP.13, the process should be informed by processes under the Convention and the Kyoto Protocol. The work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol will be particularly relevant to the work of the AWG, in particular with regard to rules-based approaches.

As further agreed in Operative Paragraph 11 of 1/CP.13, the process should be informed by outputs from other relevant intergovernmental processes. For instance, the Major Economies Meeting process will discuss matters, such as a long-term global goal for emissions reductions, which will be complementary to the work of the AWG.

As agreed in Operative Paragraph 11 of 1/CP.13, the process will benefit from insights from the business and research communities and civil society. This could be done through inviting the business and research communities and civil society to make submissions, and for the AWG Chair and Co-chair to invite qualified individuals as appropriate to make presentations at the workshops.

AUSTRALIA

INITIAL VIEWS ON A LONG-TERM GLOBAL GOAL FOR EMISSION REDUCTIONS

This submission provides initial views of the Australian Government on a long-term global goal for emission reductions, and on related matters. The Bali roadmap recognises that a long-term goal for emissions reduction is a critical component of a shared vision for long-term cooperative action.

The ultimate objective of the Convention[1] gives rise to a number of matters that the Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA) should address as part of its work program, in particular in addressing operative paragraph 1 (a) on developing a shared vision for long-term cooperative action. Two key questions for the AWG-LCA to address are (1) 'What level of greenhouse gas concentration in the atmosphere would prevent dangerous anthropogenic interference with the climate system?', and (2) 'What would be an appropriate time frame for the international community to achieve the stabilisation goal?'

The mandate for the AWG-LCA notes in particular the principle of common but differentiated responsibilities and respective capacities, and the need to take into account social and economic conditions and other relevant factors in developing a shared vision. These matters deserve careful consideration by the AWG-LCA, particularly in the context of the relative capacity and responsibility for Parties to act to mitigate emissions of greenhouse gases.

Dangerous anthropogenic interference with the climate system

The assessments of the Intergovernmental Panel on Climate Change, in particular the Fourth Assessment Report (AR4), provide Parties with a basis for making informed decisions about the relative consequences of different stabilisation levels.

The AR4 has provided a systematic understanding of the timing and magnitude of impacts related to differing amounts and rates of climate change. Climate change impacts are already evident as a result of a relatively small increase associated with global average temperature change. Projections indicate that impacts will become increasingly severe as the global average temperature rises.

Science can provide no single reference point at which a rise in the average global temperature would cross a boundary between safe and dangerous anthropogenic interference with the climate system. For instance, a two degree increase in the global average temperature above 1980-1999 levels (the AR4 benchmark) could already see widespread global impacts that would alter in severity from region to region. Australia, which has the driest and most variable climate of the inhabited continents, is projected to be among the first regions to suffer from the severe impacts of climate change.

The AR4 notes that, "determining what constitutes 'dangerous anthropogenic interference with the climate system' in relation to Article 2 of the UNFCCC involves value judgements." The AR4 notes further that "to stabilise the concentration of greenhouse gases in the atmosphere, emissions would need to peak and decline thereafter. The lower the stabilisation level, the

[1] *Article 2, The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.*

more quickly this peak and decline would need to occur."

The international community can reduce the risks associated with dangerous anthropogenic interference with the climate system through long-term cooperative action on mitigation and adaptation. Effective collective mitigation action reduces the requirements of adaptation actions. In considering what constitutes dangerous anthropogenic interference with the climate system, Parties should agree on cooperative approaches that minimise the impacts of climate change at the lowest achievable stabilisation goal. Social and economic conditions (including access to financial and investment flows) and other factors will be relevant to such consideration, as will be the availability of affordable low emissions technologies.

Stabilisation goals

The three most referenced approaches towards defining stabilisation are (1) a temperature goal limiting the rise of the long-term equilibrium global average temperature, (2) a greenhouse gas concentration goal aiming to limit global emissions of greenhouse gases to a certain level of concentration in the atmosphere; and (3) an emissions reduction goal aiming to reduce anthropogenic emissions by a certain amount compared to a specific base year.

(1) A global average temperature goal

In 1996 the EU Council decided on an ambition of limiting global temperature rise to two degrees above pre-industrial levels. Norway has adopted a similar goal. The primary benefit of such an approach is that it provides a readily understandable public objective. The main drawbacks with regard to using this goal as the basis for encouraging cooperative international action on mitigation are that the sensitivity of the global temperature to the level of greenhouse gases in the atmosphere is a significant variable, and that a temperature goal provides for no differentiation between anthropogenic and non-anthropogenic sources of greenhouse gases.

An additional consideration is that the global average temperature at equilibrium is different from the expected global average temperature at stabilisation due to the inertia of the climate system. The AR4 reports that, for most emission reduction scenarios, it would take a few centuries for the global average temperature to reach equilibrium after emissions are stabilised.

Given the loose correlation between actual emissions and global average temperature rise, the use of a temperature goal in isolation to other stabilisation goals complicates a future approach based on international carbon budgeting. Such a carbon budgeting approach, where each Party accepts responsibility for a proportion of global anthropogenic emissions, already forms the basis for mitigation action in the Kyoto Protocol.

(2) A global greenhouse gas concentration goal

An aim to limit temperature rise to a certain concentration of greenhouse gases in the atmosphere is more directly correlated to greenhouse gas emissions than a global temperature goal. The IPCC uses concentration figures to define its stabilisation scenarios. Such a goal is most accurate when expressed as a proportion (most commonly parts per million) of CO2-equivalent gases in the atmosphere. A concentration goal removes many of the uncertainties associated with a global temperature goal, but does not differentiate between anthropogenic and non-anthropogenic sources of greenhouse gases.

(3) A global emissions reduction goal

A global emissions reduction goal is closely correlated to national anthropogenic emissions. If the anthropogenic emissions of Parties are accounted in a comparable manner then such a goal should allow for accurate international carbon budgeting across national jurisdictions. It can also be tailored over time to reflect the evolution of scientific and technological knowledge.

The 'Bali Action Plan' mandates the AWG-LCA to develop a recommendation with regard to a long-term global goal for emissions reductions. Australia notes that, in addition to the Bali mandate, the G8, APEC, EAS and Commonwealth leaders have all identified the need to work towards a long-term global emissions reduction goal.

The work to develop a long-term global emissions reduction goal should be a priority for the AWG-LCA. If additional goals are considered by the AWG-LCA, any subsequent recommendations should necessarily complement and recognise the centrality of the long-term global emissions reduction goal in guiding our collective efforts.

A long-term global goal for emissions reductions

The pattern of emissions growth in recent years and the magnitude of the mitigation challenge are such that global emissions will take time to peak and then decline to a level consistent with the stabilisation of anthropogenic greenhouse gas emissions in the atmosphere. The more stringent stabilisation scenarios in the AR4 require emissions to peak and decline more quickly.

A number of countries have already nominated their preference for a global emissions reduction goal, notably Japan with a preference for a 50% reduction in global emissions by 2050 on current levels and Canada for a 50% reduction in global emissions by 2050 based on 2005. In addition a number of countries have adopted domestic long-term goals. Australia has already adopted a goal of reducing national emissions by 60% by 2050 based on 2000 levels.

The AR4 indicates that global greenhouse gas emissions need to peak in the next 10-15 years and be reduced to very low levels, below half of levels in 2000 by 2050 in order to stabilise their concentrations in the atmosphere at the lowest levels assessed by the IPCC. The AWG should take into close account the AR4 when considering its recommendation on a long-term global goal for emission reductions.

Australia considers 2050 to be an appropriate target date for the long-term global goal to reduce emissions. The base year should reflect the decision taken by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol regarding a suitable base year for the second commitment period. The goal should take into account all sources and sinks of greenhouse gases.

While the UNFCCC will set a long-term global emissions reduction goal as part of the current negotiation, this goal should be iterative to respond to the evolution of scientific knowledge and technological advancements. Similarly the need for further global emission reductions beyond 2050 will need to reflect future developments in the coming years.

Common but differentiated responsibilities

The UNFCCC enshrines the principle of working to protect the climate "on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities". This principle led to Annex I Parties agreeing to accept binding targets on national emissions under the Kyoto Protocol. There has yet to be further differentiation of responsibilities and capabilities other than highlighting the vulnerability and lack of capacity of

some Parties to respond to the impacts of climate change.

There is considerable variation in the circumstances of the 191 countries in the UNFCCC. Accordingly there can be many different approaches to differentiating and grouping countries according to such circumstances.

Thirty-nine Parties and one regional economic community are listed in Annex I to the Convention. Seven of the top 15 emitters of greenhouse gases are in this group, namely the United States, European Union, Russian Federation, Japan, Canada, Australia and Ukraine.[2]

At the other extreme, 49 Parties are Least Developed Countries (LDCs), which contribute relatively little to global emissions from energy and are a focus for development assistance. No LDC is among the top fifteen major emitters. However, emissions from land use, land use change and forestry are relatively high in some LDCs and reducing emissions from deforestation should continue to be a priority for action.

One benchmark to further differentiate the remaining 103 UNFCCC Parties is to consider them according to their respective GDP per capita[3]. Accordingly 46 of the remaining 103 Parties have a GDP per capita higher than that of Ukraine, which is an Annex I Party. This group of non-Annex I Parties includes six of the top 15 major emitters, namely Brazil, China, Iran, Korea, Mexico, and South Africa.

There are 57 Parties with GDP per capita lower than Ukraine, but which are not LDCs[4]. This group of countries includes the remaining two of the top 15 emitters – India and Indonesia.

All UNFCCC Parties should contribute towards collective mitigation efforts taking into account differing national circumstances. The top 15 emitters are responsible for nearly three-quarters of global greenhouse gas emissions[5]. These Parties will need to act as part of the post-2012 outcome for any goal to be met.

The current list of Annex I Parties does not reflect the relative contribution that all economies could make towards mitigating emissions. UNFCCC Parties should decide on an objective basis for graduation of non-Annex I Parties to the Annex I list or additional lists which may be adopted under a future framework, with a view to all advanced economies adopting a comparable effort towards the mitigation of greenhouse gas emissions. The AWG-LCA should consider and adopt recommendations in this regard.

[2] World Resources Institute, CAIT, Total GHG Emissions in 2000 (six GHGs , excluding LULUCF)
[3] IMF World Outlook 2007, GDP per capita based on purchasing power parity
[4] The number of Parties with GDP per capita higher than Ukraine *increases* if US$ is used rather than PPP.
[5] 73.8%, World Resources Institute, CAIT, Total GHG Emissions in 2000

PAPER NO. 2: CANADA

THE BALI ACTION PLAN - VIEWS REGARDING THE WORK PROGRAMME FOR THE AD HOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION UNDER THE CONVENTION

Introduction

Canada welcomes the launch of the formal negotiations under the Bali Action Plan[1] to guide the development of a new agreement to address climate change in the period beyond 2012. Canada also welcomes the opportunity to provide initial views on the work programme of the newly established Ad Hoc Working Group on Long-Term Cooperative Action under the Convention (Convention AWG).

The Convention AWG, along with the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (Kyoto AWG) and the Second Review of the Kyoto Protocol are the key elements of the Bali Roadmap that will lead to a post-2012 agreement by the end of 2009. Canada's goal is to develop a future agreement that:

- Balances environmental protection with economic prosperity
- Is guided by a long-term global goal
- Reflects national circumstances
- Includes binding action and commitments by all major emitting economies
- Promotes climate change adaptation action in all countries
- Supports the development and deployment of new technologies

Organization of work

The Convention AWG will need to develop and agree as soon as possible to a work programme in order to deliver on its ambitious mandate and to conclude in conjunction with the Kyoto AWG in a single post-2012 international agreement on climate change with contributions by all major economies. It is therefore important that discussions begin in earnest and that agreement on an iterative and responsive work programme is reached at the first meeting of the Convention AWG.

It will require dedicated, coordinated effort for the Convention AWG to match the progress already achieved by the Kyoto AWG and to do so in half as much time. For that reason, work on all of the issues outlined in paragraph one of the Bali Action Plan must begin immediately. In particular, work on determining a shared vision, including a long-term global goal should begin as soon as the next intersessional scheduled for March 31- April 4, 2008. As well, it will be crucial that work on adaptation and mitigation issues begin at the subsidiary body meetings in June 2008.
The work programme should set out an indicative schedule for the work to be undertaken at each session, including workshops, roundtables, and any compilation and technical papers that will be required. The work programme should also include calls for submissions from Parties in advance of each session to ensure that the work under each topic at the session is as focused and as productive as possible.

Incorporating relevant work that is already under way and results achieved in other processes under the Convention and Kyoto Protocol will streamline the work to be accomplished by this new negotiating process. It should further draw upon the recent findings of the Intergovernmental Panel on Climate

[1]Decision 1/CP.13

Change (IPCC) and be informed by the ongoing work of bodies such as the G8 and its related processes, the Major Economies Process and any other forums grappling with the challenge of addressing climate change.

Key Issues

1. A shared global vision – agreement on a long-term global goal

Canada believes that a future agreement to address the challenges presented by climate change must be global in scope and application. A shared vision, including a long-term emissions reduction goal, to achieve the ultimate objective of the Convention is a key component of the Bali Action Plan and will be useful in determining emissions reduction commitments required of all major emitting countries, and enhanced mitigation and adaptation actions of all Parties.

Advancing work on determining a long-term global emissions reduction goal is a priority and Parties should aim to agree to such a goal by the end of 2008.

2. Enhancing Mitigation Actions by All Countries

Nationally Appropriate Actions

A comprehensive approach to reducing global greenhouse gas emissions should necessarily incorporate as broad a spectrum of approaches to achieving those reductions as possible. The strongest action and commitment by all major emitters will be required. The Convention AWG should thus consider a full range of contributions including national emissions caps, intensity targets, regulations, energy efficiency commitments, and policy initiatives, including innovative technology partnerships between Annex I countries and emerging economies. It will also be necessary to examine methodological issues to determine how different types of commitments operate in practice and the most appropriate way to ensure that these actions are accurately measured, reported and verified.

Each country has different national circumstances and respective capabilities and the Convention AWG should determine criteria relevant to the definition of these circumstances in order that Parties may achieve some level of comfort with relative levels of comparative effort in the larger global effort to address climate change.
Among others, relative rates of economic and population growth, stage of development, structure of economies, level of emissions and recognition of regional realities and interdependencies should all be evaluated in order to inform what a reasonable contribution might be for each country. This level of comfort could be further enhanced by a study of the relative mitigation potential and costs over time of Parties such that possible short- and long-term contributions across regions may be more thoroughly understood. In keeping with the iterative nature of the work programme to be established, it may be necessary to revisit these contributions based on analysis related to other aspects of the work programme, including the means for achieving emission reduction objectives.

Means for achieving emission reduction objectives

If dangerous climate change is to be avoided, it will be necessary to leverage every opportunity to reduce cost and competitiveness distortions associated with emission reductions and maximize the co-benefits associated with these reductions. To that end, a greater share of the potential represented by carbon sinks, market-based approaches and sector-based approaches needs to be realized.

Market-based Approaches

- The Convention track should examine the operation of market-based approaches in the context of different types of commitments by non-Annex I Parties. One focus should be centered on the operation of various positive incentive proposals to ensure that they can produce emission reductions in a measurable, reportable and verifiable way. Exploration of how market-based approaches can stimulate private financial flows will also be a productive undertaking for this AWG. Further, care should be taken to minimize duplication and overlap of analytical efforts and draw on relevant work being undertaken under the Kyoto AWG and in the Article 9 review, as well as in other multilateral and regional organizations (e.g. World Bank, regional development banks, OECD, etc.).

Sector-based Approaches

- To ensure consistent global regulations for internationally competitive, high emitting industries, it is necessary to establish a common understanding of sector-based approaches among Parties, including international sectoral agreements and sectoral crediting mechanisms. It will be essential to ensure that such an approach prevents carbon leakage across borders, addresses competitiveness concerns and produces GHG emission reductions in a measurable, reportable and verifiable way. Canada is of the view that opportunities across some key sectors and technologies should be considered, and that further analysis related to design options, sectoral definition issues and emission reduction potential needs to be undertaken.

- The Convention AWG should coordinate with the sectoral work that will be undertaken under the Kyoto AWG, and can and should draw upon the efforts of organizations such as the Pew Center on Global Climate Change, the Center for Clean Air Policy, the Annex I Experts Group on the UNFCCC, and others who are advancing innovative thinking in this area.

Carbon Sinks

- In exploring means to enhance action on mitigation through Agriculture, Forestry and Other Land Use activities (AFOLU), Canada urges Parties to take into consideration relevant discussions, recommendations and on-going processes under the UNFCCC and its Kyoto Protocol. In particular, the Convention AWG will need to draw upon and take into consideration the work of the Kyoto AWG sub-group dedicated to land-use, land-use change and forestry issues to be established at AWG 5.1. Canada also believes that the 2006 IPCC Guidelines for National Greenhouse Gas Inventories already form a strong methodological basis for measuring, reporting and verifying actions in the AFOLU sector.

- In Parties' further exploration of policy approaches and positive incentives for Reducing Emissions from Deforestation and forest Degradation in developing countries (REDD), methodological implications should be referred to the SBSTA process that is currently tasked to address such issues in accordance with the decision reached in Bali.

- Globally, in addition to REDD, there is considerable mitigation potential from a range of activities in the AFOLU sector that are not currently recognized under the Kyoto Protocol (a comprehensive treatment of agriculture would be useful in this regard). Further, the policy approaches or incentives that will be most effective in enhancing such actions depend to a great extent on each Party's national circumstances. The Convention AWG would be best served by tasking an Expert Sub-Group to address the means to enhance actions in the AFOLU sector; such an Expert Sub-Group on AFOLU would then begin its work at the second meeting of the AWG.

3. Adaptation

Canada views adaptation as a key element in a future agreement on climate change. Given that adaptation has received less attention than mitigation under the UNFCCC, considerable work will be required by the AWG to further develop this important building block. This could be facilitated, in part, through informal discussions among Parties to achieve a shared vision of adaptation, and its relationship with sustainable development and disaster risk reduction. Defining a common understanding of adaptation and of the strengths and comparative advantages of the UNFCCC in addressing adaptation would help to guide the discussions.

The basic goal of adaptation should be to enhance resilience of all countries to deal with the unavoidable impacts of climate change. Analysis of specific mechanisms that promote resilience, including best practices with respect to planning and risk sharing, should be considered under the AWG. The outcomes will need to consider current barriers to adaptation, including limitations in awareness of climate risks and the local benefits of adaptation, mechanisms for information-sharing, and institutional capacity, and assess how best to address them.

Significant expertise with regard to adaptation exists across all sectors within many multilateral organizations, national governments, NGOs, development agencies and the private sector. The efforts of the AWG must draw upon this expertise to inform discussions. The AWG could consider the appropriate mechanism to encourage this engagement, building on the strengths of the UNFCCC in facilitation and coordination. The Nairobi Work Programme on Adaptation has been very successful at initiating such a broad engagement of organizations and catalyzing action outside the UNFCCC.

The science is clear that adaptation is an issue facing both developing and developed countries. The AWG should consider means to facilitate transferring knowledge and best practices to build capacity across countries.

4. Technology

The technology component of the work programme for the Convention AWG will be substantial and of significant importance. Analysis will be required to identify the suite of technologies and supporting measures that can make contributions toward achieving global emissions reductions. Canada believes that this work should draw upon the existing emission and technology scenario work of IPCC and IEA/Energy Technology Perspectives, and can be achieved through technical papers, workshops with external experts or in a separate Working Group that would meet in parallel with the Convention AWG.

Initial work on technology under the Convention AWG should identify the obstacles to scaling up development and transfer of technology to developing countries and the means to address these obstacles in an effective manner. Analysis should draw upon past work in the IPCC Special Report on Technology Transfer and in the broad body of work of the Expert Group on Technology Transfer (EGTT). The EGTT could identify, synthesize and consolidate its relevant work on enabling environments, technologies for adaptation and innovative financing and present this work to Parties in a workshop at the September 2008 intersessional meeting. External organizations, such as the Climate Technology Initiative, the IEA, the World Business Council on Sustainable Development and other UN bodies could be invited to produce similar summaries for consideration by Parties.

In a long-term agreement, Parties will need to increase understanding of technologies for adaptation and their associated characteristics which differ from those of technologies for mitigation. The work

program should draw upon existing and continuing engagement of technology and adaptation experts and their work under the Subsidiary Bodies as they determine how to address and advance issues and obstacles to implement of technologies for adaptation.

The AWG work programme should also examine the benefits of innovation protection systems and how joint R&D collaborations among developed and developing Parties could instill intellectual property rights (IPR) and bring co-benefits such as endogenous technology development. The AWG process could elaborate the essential elements of technology cooperation, including its drivers, means and partners' roles (governments, private sector and academia). Analysis could take into consideration the ongoing work of developed-developing country collaborations in other fora such as the Asia-Pacific Partnership, Asia-Pacific Economic Cooperation, the IEA and numerous bilateral and multilateral technology partnerships.

The appropriate role of the UNFCCC in terms of information sharing and dissemination among Parties should be considered, with due consideration to the special needs of Least Developed Countries and Small Island Developing States.

5. Capacity Building

Reduction of greenhouse gas emissions is dependent on the capacity of countries to take mitigation and technology actions. Targeted capacity building efforts can enhance the effectiveness of efforts to reduce emissions or adapt to the impacts of climate change. Opportunities to enhance capacity building should be explored in the context of enhancing the effectiveness of mitigation and adaptation efforts. In this regard, it will be important to ensure that existing initiatives are built upon and that there is coordination amongst efforts to minimize duplication.

Capacity building is an essential element of facilitating access to technology by developing countries. The World Bank recently identified technology absorptive capacity in developing countries as a major barrier to economy-wide technology diffusion, even though globalization has increased exposure to foreign technology. The AWG work plan could address assessment of developing country absorptive capacity constraints and the means to overcome them, including public education, awareness and outreach.

6. Provision of Financial Resources and Investment

Canada has outlined a regulatory framework that will govern the emissions from its major industrial sectors. Establishing regulatory clarity and certainty allows for greater engagement and investment from the private sector both domestically and internationally. The work programme of the AWG should consider how financial and investment flows can be optimized and mobilized through increased policy clarity and measures to reduce barriers, as well as through the reduction of investment risks to reduce costs and increase resources for technology deployment via the sustained engagement of the private sector. In Canada's view, it will not be possible to successfully address such issues without an understanding of what will be the measurable and verifiable emission reduction commitments by major emitters, including the emerging economies.

While recognizing the need to leverage increased private and public sector investment flows to address climate change, the AWG should also devote best efforts towards ensuring the optimization of the funding that is currently available.
The work programme of the Convention AWG should consider the work of the Stern Review, the UNFCCC report on investment and financial flows, the relevant work of the IPCC and new material expected to be generated over the coming year from the OECD, IEA and academic institutions in order to

develop a strategy to explicitly incorporate mechanisms to increase private and public sector financial flows into a future agreement. Further, it will be important to develop a metric to monitor the provision of climate change funding and the establishment of a link between funding delivered, commitments undertaken and results achieved.

Conclusion

Canada looks forward to initiating work on the work programme for the Ad Hoc Working Group on Long-term Cooperative Action under the Convention at its first meeting from 31 March to 4 April, 2008. Considering the heavy workload, elevated expectations and high profile of this process, it will be important to agree to an aggressive work programme by the conclusion of this first meeting. The work programme should result in the analysis necessary to agree on all aspects of the work programme, including mitigation actions, in conjunction with the adoption of the results of the Ad Hoc Working Group on Further Commitments for Annex I Parties so that a single undertaking with contributions by all major economies can be agreed to in 2009 at COP15 in Copenhagen.

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