IISD’s conference, A Way Forward: Canadian and International Perspectives on Post-2012 Climate Policy, examined the scope and implications of the Bali Action Plan. The conference represented a first step to feed into the international post-Bali process and set expectations for the next two years. Canada faces a number of unique issues, and the conference began the important task of increasing the international understanding of key Canadian sensitivities and concerns, as well as enhancing Canadian understanding of international perspectives.

The key messages from the conference were:

- A post-2012 agreement will be a package deal. The Bali Action Plan in some respects is a broad “wish list”, which indicates that a new agreement is likely go beyond the targets and markets focus of the Kyoto Protocol. This means there is much to do in a short time period, and negotiators will be hard pressed to keep on top of all of the issues.

- A sense of urgency permeates climate change discussions, and it is increasingly recognized that action is needed now to keep atmospheric levels of greenhouse gases at a safe level. This urgency is underlined by recent science; the IPCC concluded that a global warming of +3.5°C (roughly consistent with a doubling of pre-industrial emissions) would see the number of species at risk of extinction skyrocket up to 70%, from around 20% under a 2°C scenario.

- Canada is experiencing a disconnect between domestic and international climate change policy. One example is the difference between the stated domestic targets—cutting greenhouse gas emissions by 20% below 2006 levels by 2020—and Canada’s Kyoto target of 6% emission reductions below 1990 levels by 2008-2012. While the government has stated that Canada will not meet its Kyoto commitment within the compliance period, it has remained silent on how or if it will honour the non-compliance provisions for the Kyoto Protocol, which include making up the difference between its emissions and its assigned amount during the second commitment period, plus an additional deduction of 30%.

- Canada needs to define comparability of effort. What is a fair effort and what does this mean to a country that is more than 30% above its Kyoto target? Given Canada’s situation—i.e., a developed country with a growing population and economy that has thriving energy and natural resource sectors that are mostly geared to export markets—the country needs to begin to define indicators to demonstrate comparable efforts.

- There has been a shift in the debate in the United States, which is now putting forward a much more proactive stance on the issue of climate change. The U.S. is heading toward a cap and trade system, and recent initiatives include the Major Economies Meeting on Energy Security and Climate Change, and the commitment of US$2 billion to a Clean Technology Fund for developing nations. (The UK and Japan have also made contributions, and the U.S. is soliciting contributions from other G8 countries, including Canada). Considerable action is also taking place at the state level.

- The large developing nations are concerned about the impacts of climate change and the possible implications for security and political viability. Actions to adapt to climate change and reduce emissions are taking place in these countries, and there has been—especially from China, South Africa and Brazil—a more conciliatory and cooperative approach in negotiations.
The private sector requires long-term policy certainty. Companies make decisions on capital stock that have planned asset lives of decades; and these decisions do not work in the timelines of political cycles. Canadian companies expect regulation and have undertaken considerable preparation for this inevitability.

Competitiveness remains a large concern in Canada, partially driven by the country’s linkages with and reliance on markets in the United States. Domestic greenhouse gas emission reduction targets are expected to be in place shortly in the United States, likely in 2009. Many provinces are attempting to deal with competitiveness issues through participation with U.S. states in regional initiatives, e.g., the Regional Greenhouse Gas Initiative (RGGI) and the Western Climate Initiative (WCI).

The perception of moving ahead in a least cost manner—i.e., using markets—appears to be missing in Canada and in North America. This has impacted on the development of emission trading schemes, the design of offsets and relations with developing countries.

An effective dialogue process is needed in Canada over the next two years to ensure that the concerns, ideas and input of the private sector, provinces and territories, and civil society are fed into the international policy process.

The key messages in regard to the four “building blocks” of the Bali Action Plan are set out below.

Mitigation

- A key question, for both developed and developing countries is how to reduce emissions while maintaining economic growth. Achieving environmental and economic goals in a sustainable manner implies the need for significant cuts from developed countries, meaningful action by developing nations and a more nuanced approach to commitments than the Kyoto Protocol’s two-tiered system.
- There will be costs to reducing greenhouse gas emissions, but there is opportunity to minimize the effects with good policy design. Canada needs to carefully consider the costs of inaction and the benefits of action when making decisions on the issue.
- To keep costs to a minimum in Canada, there will be a need to open up access to international abatement options for Canadian companies. Accessing low cost reductions internationally will be required for Canada to hit any targets (e.g., government of Canada target of 20% below 2006 levels by 2020, Kyoto target of 6% below 1990, and Bali footnote target of 24 to 40% below 1990 levels by 2020).
- It is difficult to set climate policy and establish targets if there is no sense of where the country is headed in regard to the energy context. There needs to be serious consideration of a national energy policy, or a regional (i.e., North American) energy plan.
- Many developing countries, including China, are taking action to reduce emissions. While there is considerable domestic action taking place in the major developing country emitters, China and other developing countries could reduce efforts if the United States does not take the lead.

Adaptation

- The Arctic as been identified by the IPCC as one of four regions likely to be especially affected by climate change, along with Africa, small islands and Asian megadeltas. Climate change is happening in the north, yet Canada has not become galvanized on this issue. Canada has a responsibility to get the issue of climate change impacts and adaptation in the Arctic on the political agenda, and to take on international leadership on the adaptation issue.
- A main concern in post-2012 agreement negotiations is how to identify and report clearly on discrete adaptation actions in developing countries, as the UNFCCC commits developed countries to meet the incremental costs of adaptation measures in developing countries. To be fully effective, adaptation will need to be seamlessly integrated into development plans, and an integrated
approach that will require enhanced cooperation between the development and climate communities.

- There is need for a fundamental change in thinking to begin to climate-proof investments (e.g., roads, energy, buildings), particularly in developing countries that are undergoing rapid urban growth.

**Technology**

- A fundamental challenge is how to promote a technology revolution on a global scale that would enable, at acceptable costs, the steep reductions required to stabilize atmospheric greenhouse gas concentrations. A critical issue is the sufficiency of action under the UNFCCC and other technology cooperation programs. In practical terms, very little transfer of hard technologies has taken place under these initiatives and technology cooperation agreements to date have not yielded substantial results.

- There is a disconnect between the development of technology at the domestic level and what is happening at the international level. We need to get our own house in order and this includes promoting and developing carbon capture and storage (CCS), a key technology for Canada, and indeed the globe, because it will take decades to market the transition to a world that is not dependent. CCS is part of the solution in Canada, where reduction targets will not be met without this technology.

- A number of developing countries are taking action, with India promoting energy efficiency and renewable energy technologies. Indeed, the largest wind manufacturer in the world, Suzlon, is based in India.

- Canada will be expected to make real commitments and support needs to be ramped up domestically and internationally. To access significant technology opportunities will require a technology roadmap for Canada, and a concerted effort to promote and support Canadian technologies in international markets.

**Financing and Investment**

- Financing and investment needs for mitigation and adaptation are huge, and current levels of ODA will not be enough. There needs to be a better understanding of what will pull in private sector capital and the role of government in this regard.

- There is positive momentum in this area, with growth in sustainable energy investment and government regulations helping to drive investments in renewables. There is no shortage of money to invest in clean technologies; the challenges are finding the opportunities for investment and articulating the issues. Despite huge advances in the Clean Development Mechanism (CDM) and carbon market, financiers, investors and bankers need a simplification of the issues.

- A number of financing innovations are emerging. Norway is promoting levies on aviation and marine bunker fuels. Germany and the EU are opting to use revenue from allowance auctions to finance a number of climate change priorities. The EU plans to auction allowances after 2013, and auctioning income could be used for adaptation and technology activities at home in and in developing countries. In the U.S., the Lieberman-Warner Bill proposes that a portion of the revenues from the auctioning of emission allowances be used to support REDD, technology and adaptation activities.

- As the sixth largest member of the G8, Canada has to decide if they want to use this position to be an important leader or a follower. To be a leader means increasing R&D efforts, providing financing for developing countries, scaling up investment at home, and taking part in getting innovative financing options off the ground.
A Way Forward:  
Canadian and International Perspectives on Post-2012 Climate Policy  
March 3 & 4, 2008 ~ Crowne Plaza Hotel ~ Ottawa, Canada  

CONFERENCE REPORT

Introduction
On March 3-4, 2008, over 100 participants met in Ottawa for IISD’s conference, A Way Forward: Canadian and International Perspectives on Post-2012 Climate Policy. The aim of this conference was to examine the scope and implications of the Kyoto-track negotiations, with an emphasis on the four elements of the Bali Action Plan. The conference represented a first step to feed into the international post-Bali process and set expectations for the next two years. Canada faces a number of unique issues, and the conference began the important task of increasing the international understanding of key Canadian sensitivities and concerns, as well as enhancing Canadian understanding of international perspectives.

IISD opened the workshop with an overview of IISD’s post-2012 initiative, and a presentation on the outcomes of COP 13 and the Bali Action Plan. A panel of five international speakers furthered the discussion by providing global perspectives on a path forward under the Bali Action Plan; while a panel of five Canadian experts provided domestic insights. The sessions on the second day focused on the four elements of the Bali Action Plan: mitigation, adaptation, technology, and financing and investment. Participants from government, industry, academia and NGOs contributed to discussions throughout the two days. All presentations can be accessed from the IISD website: http://www.iisd.ca/.

Opening Session
David Runnalls, CEO and President, IISD opened the conference, welcoming participants and explaining that the conference was a culmination of a two-year IISD dialogue process to examine Canada’s role in post-2012 climate policy, which began in the lead-up to COP 11 in Montreal. He noted that the climate change is at the forefront of national and global political agendas, evident from the priority given to the issue at many domestic and international meetings.

John Drexhage, Director, Climate Change and Energy, IISD, provided an overview of the outcomes of COP 13 and the Bali Action Plan, summarizing the status of negotiating tracks, the four key elements in the Bali Action Plan and a variety of noteworthy supporting activities that took place at Bali. A two-track approach (the Ad Hoc Working Group on long-term dialogue under the UNFCCC on long term cooperative action and the Ad Hoc Working Group on further commitments for Annex I Parties under the Protocol) maintains a degree of separation in the negotiations. Drexhage suggested there is hope that the two tracks will merge in the future, given the intimate linkages between the two processes. He highlighted that the two-year negotiation process will need to: include participation of all Parties in complex, difficult and long negotiations; foster U.S. engagement; encourage interaction and linkages with initiatives outside of the UNFCCC; address the role of major developing countries and energy superpowers; and broaden out a future agreement to more fully integrate LULUCF, international aviation and other sectors. He concluded by noting a fifth overarching element required of a future regime—a far-reaching vision that includes a clear global definition of dangerous anthropogenic interference over the long term.

Eric Whan, Globescan Incorporated, summarized results from global public opinion research on climate change as well as from surveys of climate decision-makers. There is growing concern, awareness and mainstreaming of climate change in Canada and abroad, bringing about political momentum for action and broadening the issue beyond being viewed just as an environmental concern. Public opinion polls show unprecedented public engagement, and a large global constituency calling for immediate action on human
causes of climate change. The climate decision-maker survey identified required components of an adequate post-2012 agreement, priority climate solutions over the next two years and ratings of efforts in the past year to address climate change. The results showed that decision-makers view action by all countries in parallel as important; and there is strong support for funding and technology transfer to assist less-wealthy countries.

**International Panel**

The international panel provided a variety of perspectives on the Bali process. The panellists addressed the following questions: What are your views on outcomes of Bali? What are the implications for negotiations and actions over the next two years?

*Harlan Watson, Senior Climate Negotiator, United States,* noted that the Bali Action Plan was a great breakthrough and a welcome advance in negotiations. The U.S. places importance on reaching an agreement that is environmentally effective and economically sustainable, and that includes actions by all major emitters. The U.S. is moving in a proactive manner and has put forward a number of national initiatives since 2001, including fuel standards, efficiency standards, building codes, tax credits and technology initiatives. The 2009 budget is expected to include US$8.6 billion for climate change programs. The U.S. has initiated international technology agreements and bilateral partnerships. Recent action includes movement on a national cap and trade scheme, where there are a number of bills proposing climate change targets before Congress; the Major Economies Meeting on Energy Security and Climate Change; and a US$ 2 billion contribution to a Clean Technology Fund for developing nations. (The UK and Japan have also made contributions, and the U.S. is soliciting contributions from other G8 countries, including Canada.) Considerable action is also taking place at the state level.

*Hironori Hamanaka, Chair, Institute for Global Environmental Strategies (IGES), Japan,* provided context on how the landscape has changed between COP 1 in 1995 and COP 13 in 2007. He noted the accomplishments of Bali, which included agreement on a common vision, a roadmap for negotiations, and an inclusive process. Challenges moving forward include a short timeline and complex negotiations; a two-track process; the need to make progress in a number of areas (reducing emissions from deforestation and forest degradation (REDD), technology transfer) and the North-South divide. Moving forward will require strong political will; and recognition of varying national circumstances and abilities to take on different types of commitments or actions will be central to negotiations. Prof. Hamanaka also provided information on Japan’s Cool Earth Promotion Programme and noted that climate change will be a top priority issue for the G8 Hokkaido Toyako Summit.

*Nitu Goel, Research Associate, The Energy and Resources Institute (TERI), India,* outlined the key outcomes of the Bali Action Plan. She noted that a Prime Minister’s Council on Climate Change has been established in India to identify specific areas of intervention to develop mitigation strategies. In regard to a path forward, enhanced actions are required by all countries and developed countries will be required to support action in developing countries. Rapid development is not only an economic priority, but also an essential response to climate change, and will require creative national policies. Developing countries are increasingly taking on a proactive role under the Convention framework, and putting forward the notion that all Parties have to be prepared to bring about changes in lifestyles. To move forward effectively over the next two years will require exploring climate change linkages with trade, finance, aviation, tourism, and international security.

*Henry Derwent, President and CEO, International Emissions Trading Association (IETA),* discussed four issues of importance in regard to the negotiations over the next years. The first was the shadow of the United States, as no agreement will be effective without US engagement. Competitiveness issues are huge in the U.S. and the timing of domestic decisions on climate change (e.g., domestic targets for cap and trade) could impact on involvement in the international negotiations. Second, there are a number of specifics to sort out before an agreement can be reached, such as sectoral agreements, SD-PAMs, needed financial flows. Third, there are a number of potential pitfalls that could derail the negotiation process; and fourth, there is a need to meaningfully engage other processes (e.g., G8, MEM, World Bank)
Georg Børsting, Ministry of Foreign Affairs, Norway, noted that Canada and Norway have historically had close cooperation under the Umbrella group. Norway’s aim at Bali was to broaden and make a future regime more ambitious, recognizing that the Kyoto Protocol is not a sufficient answer and is not realistic for developing countries. In the end, the Bali Action Plan ended up being more ambiguous and weaker than Norway had hoped for, containing a long “wish list” representing the different priorities of various Parties. This suggests that Parties face an extremely challenging process over the next two years. Norway is acting seriously on its 2°C goal, and aims to over-comply by 10 per cent and become carbon neutral by 2030. While recognizing that this is extremely ambitious, there is broad political agreement on several issues of importance in Norway. Norway views the carbon market as central, and will use the Kyoto mechanisms and the EU Emissions Trading System (ETS), and hopes to see an incremental move toward a more global system. Other key components for an international agreement include technology—with Norway having a large focus on CCS—sectoral approaches, and REDD. Norway hopes to see international aviation and marine transport included in a new agreement.

Key issues in the discussion session included:

- The linkages between domestic and international action, and the need to strengthen the linkages in Canada. The approaches used in Norway and Japan attempt to ensure that action on the domestic front feeds into and informs international negotiations.
- Comparability of effort, and what this means for not only Canada, but also the large developing emitters.
- The co-benefit approach to provide incentives for developing country participation was noted as of interest to Japan.
- Markets, which were the basis for the Kyoto Protocol, are given only a mention in the Bali Action Plan.
- The large developing nations are concerned about the impacts of climate change and the possible implications for security and political viability. Actions to adapt to climate change and reduce emissions are taking place in these countries, and there has been—especially from China, South Africa and Brazil—a more conciliatory and cooperative approach in negotiations.
- A post-2012 agreement will be a package deal. The Bali Action Plan in some respects is a broad “wish list”, which indicates that a new agreement is likely go beyond the Kyoto Protocol focus on targets and markets. This means there is much to do in a short time period, and negotiators will be hard pressed to keep on top of all the issues.

Canadian Panel

The Canadian panel addressed the following questions: What are the key issues in Canada in delivering on the Bali Action Plan to develop a comprehensive and effective post-2012 framework?

Pierre Marc Johnson, Environment Canada Special Advisor to COP-13, began the discussion, noting the special circumstances of Canada and the difficulties encountered by Canada in meeting its international goals. He discussed the urgency of the situation, the actions underway in Canada, and Canada’s involvement in a number of international processes—e.g., G8, APP, technology agreements. Canada is well-positioned to seize opportunities and be a leader over the next two years, but this will require concerted action and political commitment.

Jim Whitestone, Director, Air Policy and Climate Change, Ontario Ministry of Environment, provided perspectives from a provincial government. Ontario has introduced its Action Plan on Climate Change, which sets short-, medium- and long-term targets for reducing Ontario’s greenhouse gas emissions, starting now and continuing through mid-century. The province is setting out the measures to achieve these targets, such as new regulations, conservation, renewable energy, and a phase-out of coal-fired power plants. Mr. Whitestone noted that Ontario and other provinces are also active internationally, participating in initiatives with various states, as well as working with other countries, such as China. It is very important that the provincial experience feed into the national process and the negotiations over the next two years.

Jim Cormack, Senior Advisor, Climate Change, TransCanada Pipelines, provided a private sector perspective, noting that companies are prepared to be regulated and have undertaken considerable preparation for this inevitability. The private sector is looking for long-term policy certainty from the
government. Companies make decisions on capital stock that have planned asset lives of decades; and these decisions do not work in the timelines of political cycles.

Matthew Bramley, Director, Climate Change, Pembina Institute, noted that the Bali Roadmap makes reference to an aggregate reduction in industrialized countries’ emissions to 25-40% below the 1990 level by 2020, in line with climate science. Canada’s domestic targets and policies will need to be strengthened for Canada to meet this international standard. Canada needs to consider how it will reconcile the expected growth in the oil and gas sector with the need to reduce greenhouse gas emissions. This may require financing cost-effective emission reduction projects internationally to help meet targets. Canada will need to deal with these and other issues in order to play a responsible role in the post-2012 negotiations over the next two years.

Stephanie Meakin, Science Advisor, Inuit Circumpolar Council, provided information on the Inuit 2012 Climate Change Roadmap. She noted the activities of the Council, which include the Arctic Council, ArcticNet, International Polar Year and a variety of activities leading up to COP 13. The Council has been active on climate change for a number of years, and aims to raise awareness of the magnitude of the impacts of climate change on Inuit communities. Climate change is happening in Canada’s north, as evident from sea ice decline and increasing temperatures at the top of the permafrost layer, and urgent action is needed to both reduce emissions and adapt to these changes.

The discussion session raised a number of issues:

- Canada has an opportunity to be a leader, but action is needed now. There are opportunities at home and internationally, for example, the G8 + 5 is one important area for Canada to participate and find solutions.
- A sense of urgency permeates climate change discussions, and it is increasingly recognized that action is needed now to keep atmospheric levels of greenhouse gases at a safe level. This urgency is underlined by recent science; the IPCC concluded that a global warming of +3.5°C (roughly consistent with a doubling of pre-industrial emissions) would see the number of species at risk of extinction sky rocket up to 70%, from around 20% under a 2°C scenario.
- Canada is experiencing a disconnect between domestic and international climate change policy. One example is the difference between the stated domestic targets—cutting greenhouse gas emissions by 20% below 2006 levels by 2020—and Canada’s Kyoto target of 6% emission reductions below 1990 levels by 2008-2012. While the government has stated that Canada will not meet its Kyoto commitment within the compliance period, it has remained silent on how or if it will honour the non-compliance provisions for the Kyoto Protocol, which include making up the difference between its emissions and its assigned amount during the second commitment period, plus an additional deduction of 30%.
- The Kyoto commitments were too ambitious in Canada, and there is a need to define targets and commitments that are doable and acceptable at home and internationally.

DAY 2 – Opening Session

John Drexhage opened the day with an overview of the four elements of the Bali Action Plan: mitigation, adaptation, technology, and financing and investment. He noted that these four elements that have evolved since COP 11. While adaptation and technology were maintained in the action plan; the scope was broadened, such that the focus on market-based opportunities was replaced with financing and investment, and sustainable development was replaced by mitigation. He stressed the need for dialogue within Canada that looks not only at domestic issues but considers international processes in a more concrete way. IISD’s assessment of the four Bali pillars from a Canadian perspective begins to lays the groundwork for discussions in Canada and internationally over the next two years.

Adaptation

Jane Gray, Director, Climate & Green Initiative, Manitoba Science, Technology and Mines, introduced the session by providing an overview of adaptation in Manitoba, where projections call for severe impacts for agriculture, forests and northern communities, which includes floods, record forest fires seasons, melting winter roads with shorter seasons and droughts. She noted that early adaptation activities—water
protection, reducing nutrient loading, sustainable farm practices—have multiple benefits including saving government expenditures, protecting farmers by lowering input costs, protecting the boreal forest, creating aboriginal ecotourism opportunities, and enhancing opportunities for the port of Churchill with a longer shipping season.

Jo-Ellen Parry, Project Manager, IISD, presented on adaptation, which she referred to as the least understood element in the Bali Action Plan, and one that still requires clarity as to how it will be addressed in post-2012 regime. Effective adaptation will require a combination of top-down efforts based on modelling and projections as well as bottom-up approaches that focus more on vulnerability issues in local communities. Key issues to address over the next two years include financing adaptation (including the complexity of the financing negotiations, which will take place under all elements of the action plan), the unique challenges of different countries and regions, defining the role of the UNFCCC and the international community both within and outside the Convention, and the overlap between development and adaptation. Canada can play a defining role and help to meet the needs of all countries by sharing domestic science and research; increasing development assistance; and integrating adaptation at the international level beyond UNFCCC, to create links with security, international trade, etc.

Prof. Hamanaka provided Asian perspectives on adaptation. He noted there are ambiguities and multiple demands, including the need for: bottom-up solutions; mainstreaming adaptation with development; increasing adaptation financing; and fundamental changes in thinking to promote climate-proof investments (roads, energy, facilities), particularly in developing countries and areas still undergoing infrastructure planning. Adaptation needs to be considered as a development issue, and there are also synergies with disaster risk management. The important role of private sector, particularly the insurance sector, also needs to be considered.

John Van Mossel, Senior Consultant, Marbek Resource Consultants, provided a Nigerian perspective, noting that changes are occurring now, evident from increasing desertification and loss of biodiversity. In Nigeria, farmers are impacted, and internal migration is noticeable. Capacity needs to be built in impact assessment and accessing GEF funds. Work on adaptation must be based on bottom-up learning and the case study approach can be used to assess methodologies and approaches. Strategic adaptation is needed in key places, and the OECD work on guidelines for bilateral programs for adaptations need to be picked up in Canada.

Angie Dazé, Regional Climate Change Coordinator, Southern and West Africa, CARE International, commented that the dialogue on adaptation must move beyond rhetoric, and concrete action and commitments are required. New and additional resources beyond ODA are key, and while funding needs are huge, they are small in comparison to the cost of potential catastrophic scenarios. Adaptation action must target and engage a wider range of stakeholders. It is dangerous to assume national governments will represent needs of most vulnerable, who are often not engaged in government-level decision-making. Their voices need to be brought into the dialogue, and steps should be taken to engage local governments, the private sector and civil society. Increasing representation from the development and disaster communities is noticeable at climate change negotiations, and these communities have much to share with the climate adaptation community. We need to think of ways to ensure a positive and substantive role for the development community in the future regime.

Key points raised in discussion included:

- Poverty Reduction Strategy Papers (PRSPs) need to include climate change adaptation to help increase funding from donors. The development community, e.g., Oxfam and CARE, needs to influence the agenda of CIDA for change to occur.
- The Arctic as been identified by the IPCC as one of four regions likely to be especially affected by climate change (The other three are Africa, small islands and Asian megadeltas). Climate change is happening in the north, yet Canada has not become galvanized on this issue. Canada has a responsibility to get the issue of adaptation climate change impacts and adaptation in the Arctic on the political agenda, and to take on international leadership on the adaptation issue.
- A main concern in post-2012 agreement negotiations is how to identify and report clearly on discrete adaptation actions in developing countries, as the UNFCCC commits developed countries to meet the incremental costs of adaptation measures in developing countries. To be fully effective, adaptation will need to be seamlessly integrated into development plans, and an integrated
approach that will require enhanced cooperation between the development and climate communities.

Technology

Tony Irwin, Spectra Energy, facilitated the session, noting the importance of technology and the need for effective private sector engagement.

Deborah Murphy, Associate, IISD, presented on technology, noting that a fundamental challenge is how to promote a technology revolution on a global scale that would enable, at acceptable costs, the steep reductions required to stabilize atmospheric greenhouse gas concentrations. A critical issue is the sufficiency of action under the UNFCCC and other technology cooperation programs. In practical terms, very little transfer of hard technologies has taken place under these initiatives and technology cooperation agreements to date have not yielded substantial results. Key issues in moving forward include financing, creating the right policy frameworks, putting a price on carbon, taking action in multiple forums, measuring progress under the technology pillar, encouraging effective private sector participation, and looking for new technology development models. Canada will be expected to make real commitments, and support needs to be ramped up domestically and internationally. To access significant technology opportunities will require a technology roadmap for Canada, and a concerted effort to promote and support Canadian technologies in international markets.

Nitu Goel, TERI, provided an Indian perspective on technology, noting that many developing countries are very proactive in the technology area. India has introduced energy efficiency standards, and promoted public transit programs, bio-diesel and renewables. The country has a Ministry of New and Renewable Energy Sources that leads actions in this area. Indeed, the largest wind manufacturer in the world, Suzlon, is based in India. Barriers to technology RD&D include limited financial investment, a need for R&D to adapt technologies to the Indian situation, and developed country reservations to share information because of intellectual property rights. Financing and technology transfer are required, flexibility mechanisms need to be used to their full potential, and bilateral and multilateral partnerships are needed to foster action.

Bob Page, Transalta Professor of Environmental Management and Sustainability, Institute for Sustainable Energy, Environment and Economy, University of Calgary, noted the disconnect between the development of technology at the domestic level and what is happening at the international level. Canada needs to get its own house in order and this includes promoting and developing carbon capture and storage (CCS), a key technology for Canada and abroad. The transition to a world that is not dependent on fossil fuels will take decades. CCS is part of the solution in Canada, where reduction targets will not be met without this technology. We need to start today to take action, and the national task force on CCS noted that public policy and incentives need to be in place so as to not lose time. Domestic action is taking place, and experience in Alberta indicates that Canada can move this technology from a domestic to international context within five to ten years. Key considerations are including CCS under the CDM, addressing the barrier of intellectual property rights and putting policies in place to ensure Canada’s leadership in this area.

The discussion touched on:

- Technology choice – while a strong focus on CCS is needed, we need to develop a new outlook in regard to renewables, which are not thought to be a huge penetrating factor in North America. Renewable energy is making huge inroads in other areas of the world. What is it about the Canadian mindset that makes us not seize the opportunity, but remain more interested in protecting ourselves from risks and threats?

Mitigation

George Foote, Director, Energy Markets & Climate Change, Nova Scotia Department of Energy facilitated the session.

Dave Sawyer, Associate, IISD, discussed the interaction of mitigation and economic growth. He noted that emission reductions have significant costs and economic implications, but there is opportunity to minimize the effects with good policy design. The economy and emissions are expected to grow through 2020 in
Canada, meaning that effective policies will be required to meet targets. To keep costs to a minimum in Canada, there will be a need to open up access to international abatement options. Access to low cost reductions internationally will be required for Canada to hit any targets (e.g., government of Canada target of 20% below 2006 levels by 2020, Kyoto target of 6% below 1990, and Bali footnote target of 24 to 40% below 1990 levels by 2020). Low cost options exist, such as REDD, sectoral approaches and new market mechanisms, but there are still technical questions to work out. Domestic policy needs to engage on the international dialogue to address some of these issues. Target attainment risks include: that the required shift in policies actually taking place, affordability concerns and perceptions, and effective changes in consumer behaviour. Canada needs to carefully consider the costs of inaction and the benefits of action when making decisions on the issue.

Art Hansen, Lead Expert, China Council for International Cooperation on Environment and Development, provided perspectives on the situation in China. The current leaders are staking their reputation on building China’s capacity to increase GDP per capita by a factor of four while being environmentally sustainable. The discussion of a transition to low carbon economy in China represents a significant change from a year ago when it was not polite to speak about climate change. China is taking action and is ready to take more because of concerns about the impacts of climate change for both security and political reasons; and wanting to be seen as a good global citizen. The current five year plan has a solid emphasis on energy efficiency improvements, China has a national action plan on climate change, and the government is debating the development of a new super ministry to deal with energy and climate change. While there is considerable domestic action taking place, China and other developing countries could reduce efforts if the United States does not take the lead.

Ned Helme, President, Center for Clean Air Policy, raised a number of issues for consideration in the Canadian context. The IISD report on mitigation focused on the need for access to international reductions for cost-effective reductions. But there is also a need for the large developing emitters to also take real reductions that are additional to CDM. This is beginning to happen in some countries, e.g., China and Brazil. In regard to a cap and trade scheme, there is a need to think about what you do with the allowances; for example, recycling the allowances (e.g., tax relief) could cover half the cost of CCS or assist in other technology development. The U.S. and the EU are considering innovative options for use of revenues from allowance auctioning; this could include both adaptation and technology. Canada needs to define comparability of effort and define indicators to demonstrate comparable efforts.

Discussion noted that:

- A key question, for both developed and developing countries is how you reduce emissions while maintaining economic growth. Achieving environmental and economic goals in a sustainable manner implies the need for significant cuts from developed countries, meaningful action by developing nations and a more nuanced approach to commitments than the Kyoto Protocol’s two-tiered system.
- What is a fair effort and what does this mean to a country that is more than 30% above its Kyoto target? Given Canada’s situation—i.e., a developed country with a growing population and economy that has thriving energy and natural resource sectors that are mostly geared to export markets—what indicators are needed for Canada to define a fair target that considers comparability of effort?
- It is difficult to set climate policy and establish targets if there is no sense of where the country is headed in regard to the energy context. There needs to be serious consideration of a national energy policy, or a regional (i.e., North American) energy plan.

Financing and Investment

Jean Nolet, Associate, IISD, chaired the session. In his opening remarks, he noted the difficulties in researching and developing policy positions in an ever-evolving field, and the ability of IISD to respond to the changing conditions.

Dennis Tirpak, Associate, IISD remarked that financing and investment needs for mitigation and adaptation are huge, and current levels of ODA will not be enough. While questions remain related to the accuracy of data on financing and investment, what is evident is that the needs are massive, even when compared with other financial flows—FDI at $350 billion in 2006, ODA at $100 billion in 2006. He noted that GEF assistance gets a lot of emphasis in the financing and investment discussion, yet GEF
assistance represents only 2% of total global investment in energy. There has been tremendous growth in sustainable energy investment in the past two years, and government regulations are largely responsible for the growth in renewables. But as we move forward, there will be a shortfall in financing, and how we green investment will be critical. There needs to be a better understanding of what will pull in private sector capital and the role of government in this regard. Canada needs to consider how it will scale up investment, what will be the focus of R&D efforts, and how it will finance actions in developing countries, an area where Canada could play a role in developing the innovative policies. As the sixth largest member of the G8, Canada has to decide if they want to use this position to be an important leader or a follower. To be a leader means increasing R&D efforts, providing financing for developing countries, scaling up investment at home, and taking part in getting innovative financing options off the ground.

Erik Haites, President, Margaree Consultants, touched on the financing needs in the other areas of the Bali Action Plan. Mitigation needs are $200 billion globally, with financing needed for renewables, electricity generation, CCS, infrastructure, transportation, energy efficiency and forestry. Both regulations and public financing are needed to stimulate critical private sector investment. The carbon market also plays an important role in stimulating technology RD&D. In regard to adaptation, the UNFCCC report notes that an additional annual investment of $25 to 60 billion is needed in developing countries. This can be through the private sector, e.g., through climate proofing private and public investments, but public support in the form of financial transfers will also be needed. There are also significant R&D needs. The current methods of ODA are not going to provide adequate financing, and thus the need for innovative financing options. Ideas put forward included levies on aviation and marine bunker fuels and using revenues from auctioning of allowances. The push to look at new financing options is reassuring to developing countries as they could provide a more predictable flow of funds.

Doug Russell, Managing Director, Natsource, focused on three aspects of financing and investment: the scope of the carbon market; international challenges facing the carbon market; and a role for Canada. He noted that the Bali Action Plan strayed from the emphasis on market, but this could be a good or bad thing. There is some measure of relief that there will not be too much reliance placed solely on the market. The carbon market is young, only starting in 2001, but it has already helped to deliver on the deployment of technology through the CDM. He noted that there is no shortage of money for clean technology; the challenge is to find the investment opportunities. The size of the carbon market in 2007 was $59 billion, and in 2008 it is expected to be in the order of $91 billion (note that is still small in comparison to the size of the overall investment market). Canada needs to: look at major economic drivers and plan policy accordingly; be clear about what is taking place in the U.S. and determine how to connect with that; learn from the CDM in the development of offset rules; and build trust internationally by using the carbon market as a tool for emission reductions.

Diana Smallridge, Managing Director, Green Capital Advisors, indicated that there is a supply of financing for green technology; the problem is not the absence of capital, but the articulation of the issues. The gap in financing is a result of an awareness and understanding gap. Financers only look at the rates of return; and there is a need to simplify things for them so that they can see what is taking place. We can begin to close the financing gap by understanding the avenues of financing and the motivations of the different communities (multilaterals, carbon market). The government needs to create inducements to pull in private capital, and they need to understand their impacts—government sometimes do things that create larger gaps.

Discussion included comments on a number of issues:

- Sustainable Development Technologies Canada (SDTC) is an example of a successful government program that has a good balance of technology development and getting the private sector to invest in the technologies. Other successful examples include renewable certificates, feed-in tariffs, tax credits and cash incentives financed by levies on electricity or by government.
- Canada does have a role to play in regard to financing and investment. Canada has a history of ODA and a strong banking sector; but our role in the carbon market has declined and Europe has emerged as its centre. In regard to venture capital, while Canada lags behind the U.S., there has been more participation in clean technologies in the recent past.
- In the negotiating process, the developing countries want to focus on getting a single deal. They are likely looking for agreement at COP 15 on a large pot of money to access for climate change
actions. In reality, there are a number of different financing “pots” and flows, and this a message that needs to enter the negotiations.

- We need to look at developing countries like China that are becoming funders themselves. There is a risk of the World Bank being irrelevant if developing countries start to fund projects in other developing countries for which there are no restrictions in terms of the environment.

- A number of financing innovations are emerging. Norway is promoting levies on aviation and marine bunker fuels. Germany and the EU are opting to use revenue from allowance auctions to finance a number of climate change priorities, including technology and adaptation. In the U.S., the Lieberman-Warner Bill proposes that a portion of the revenues from the auctioning of emission allowances be used to support technology and adaptation actions.

Final Panel: The Bali Action Plan and Canada’s Role: Where do we go from here?

Discussion in the final panel focused on the relationship between the U.S. and Canada and the implications for Canada. Speakers noted a shift in the debate in the United States, which is heading to a cap and trade system, and all presidential candidates are committed to this. The Lieberman Warner Bill includes border tax adjustments based on comparable effort. International competitiveness is a big deal in the U.S, and this can cause concern for Canada, which is a huge exporter to the States. An interesting way to deal with the competitiveness issue is through grandfathering in energy export markets. Canadian exporting companies in cap and trade programs in Canada could be taken care of with grandfathering clauses (e.g., that allow extra allowances) to ease the “hit” until the U.S. comes on board. It was noted that this is essentially a subsidy, and the experience of the first phase of the EU ETS offers lessons in this regard.

Others felt that competitiveness issues are manageable and limited, and we need to get beyond the ‘who jumps first’ mindset. Many provinces are attempting to deal with competitiveness issues through participation with U.S. states in regional initiatives, e.g., the Regional Greenhouse Gas Initiative (RGGI) and the World Climate Initiative (WCI). Work on the competitiveness issue has been undertaken in Canada by both the private and public sectors. Competitiveness is a difficult argument, and hard to defend through the literature. But perception is huge—even if it is only a small part of the problem, there are some very noisy industries.

The economics of the Stern and IPCC reports that predict moderate impacts on global GDP assume massive international trading flows. The perception of moving ahead in a least cost manner—i.e., using markets—appears to be missing in Canada and in North America. This has impacted on the development of emission trading schemes, the design of offsets and relations with developing countries. The frame of reference for the discussion on the use of international carbon credits seems to be different than for other spheres of economic activity where people make deals where it is most economically efficient. This seems totally unacceptable for buying carbon in North America, where international trading has a bad name.

Canada’s short term focus on domestic policy is not strategic when international negotiations are so important over next two years. The consequences of being a developed country outside the climate regime are very risky. Canada needs to position itself to negotiate a more acceptable target, and needs strong domestic action to appear credible at the international level.

A post-2012 agreement will be a package deal. The Bali Action Plan in some respects is a broad “wish list”, which indicates that a new agreement is likely go beyond the Kyoto Protocol focus on targets and markets. This means there is much to do in a short time period, and negotiators will be hard pressed to keep on top of all the issues. Canada needs to consider how to get domestic audience engaged at the international level and vice versa. An effective dialogue process is needed in Canada over the next two years to ensure that the concerns, ideas and input of the private sector, provinces and territories, and civil society are fed into the international policy process.