Clean Development Mechanism Workshop

REPORT

Hosted by

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CANADA

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ACKNOWLEDGEMENT

On behalf of the Department of Foreign Affairs and International Trade, I would like to take this opportunity to thank you for participating in the Clean Development Mechanism Workshop held in Ottawa, on July 14, 1998. Your active involvement was greatly appreciated.

The 62 Workshop participants produced a wide range of views, exchanges of experience and sound advice on the possible workings of this important new climate change mechanism. The results will usefully inform further the positions our negotiators will represent in post-Kyoto international negotiations.

The attached documents include: the Summary Report from the Rapporteur; Presentations and summaries of questions and answers sessions; Working Group Reports; as well as the papers distributed for the Workshop.

We look forward to further opportunities to work closely with you, both in the context of position development activities and as the Department of Foreign Affairs and International Trade prepares to establish a new climate change projects office.

Yours sincerely,

P. Heinbecker

Paul Heinbecker
Assistant Deputy Minister
Global and Security Policy

Clean Development Mechanism Workshop

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SUMMARY REPORT

Rapporteur: **Jim Leslie**
Program Director of Solutions for Business
International Institute for Sustainable Development (IISD)

Richard Kinley, Coordinator, Resources, Planning and Coordination of the Climate Change Secretariat in Bonn opened the Clean Development Mechanism Workshop with his keynote address. He outlined the process of reaching the final agreement at Kyoto and especially the action of the final critical hours. He described the Kyoto Agreement in terms of two themes – flexibility and credibility. He sees the promise of the Kyoto Agreement in its stimulus for new technologies to address the climate change issue, its influence on the behaviours of emitters and nations and in the opening-up of new markets to facilitate low-cost action. Mr. Kinley stressed the importance and potential of the Clean Development Mechanism (CDM) for overall global sustainable development and for building commitments in the developing world towards action on climate change. He noted that sustainable development is the imperative of the developing world. Through the Kyoto Agreement, he sees the potential for an enlightened combination of domestic action in the developed world and international action in the developing world.

The opening remarks for the workshop on July 14th by Paul Heinbecker, Assistant Deputy Minister, Global and Security Policy, Department of Foreign Affairs and International Trade (DFAIT), built upon the themes provided by Mr. Kinley. Mr. Heinbecker talked of the importance of the goal of achieving effective market-based approaches through the development of emissions trading and credit for effective international action. He stressed the critical need to use every effort to find least-cost actions because there are no dollars to spare in the pursuit of our climate change goals. Mr. Heinbecker underlined the significance of emissions trading, joint implementation and the CDM for Canada. Canada needs a combination of both domestic and international actions in its climate change strategy.

Mr. Heinbecker highlighted the need in developing countries for sustainable development and for the technologies that will contribute to such development. He indicated that we have now framed the interests of both developing and developed countries well and we have the basis of bargaining. But the negotiations will be difficult. He stressed that the flexibility mechanisms of the Kyoto Agreement are not an academic issue; positions have to be taken for negotiations in the Fall of 1998. Finally, Mr. Heinbecker noted that DFAIT is the new home of the JI/CDM Office. This office will be mobilized in the Fall of 1998.

Dr. Irving Mintzer, Senior Associate, Pacific Institute for Studies in Development, Environment and Security, addressed the subject of the institutional issues of the CDM. He described the Kyoto Agreement as providing the basic structure that we now need to equip and furnish with the details of the flexible mechanisms that the

Kyoto Agreement set out. We need to build the bridges of trade that will support cost-effective action.

Dr. Mintzer set out the basics of CDM in terms of a series of questions. What is it? What is it's purpose? Who can participate? What happens to the proceeds? How will it be organized? and How will we know if it worked? He described the CDM as a special kind of joint venture project. Its results will be tonnes of greenhouse gas emissions reductions and financial benefits.

The focus of Dr. Mintzer's remarks were upon the institutional and organizational aspects of CDM and he highlighted a series of key questions relating to its organization. Would the CDM be an aggregation of bilateral agreements and projects or a multilateral portfolio-based mechanism? Would it be a combination of both? He discussed the role of the Executive Board and options for its tasks. He raised and discussed questions as to where operational responsibility should reside. He addressed the issues of ensuring the attractiveness of CDM for the needs of host countries for sustainable development. Finally, he outlined the measures of success of CDM. These include the volume of activity; size and cost of projects; the price of emission reductions; the attitudes of individual countries and stakeholders; and the building of capacity for climate change action.

Don Macdonald, Senior Manager, Technical & Scientific Evaluation, Environmental Affairs Branch, Policy Division, Alberta Energy was the next speaker. He discussed the relationship between credits for early action and the CDM and provincial opportunities. Mr. Macdonald outlined the issues related to credit for early action both for individual firms and for governments. He sees emissions reduction credits for the firm as being a hedge against future climate change obligations. At the government level, emissions reduction credits provide a credit in the country reporting. Mr. Macdonald then went on to discuss investment risks and credits in relation to CDM action. He reviewed the basic structure of projects and the effect of regulations and regulatory risk in driving actions. He talked about the progression of value from action taken from the public relations value through the recognition of voluntary action to ultimately full credit for action taken. He discussed the approach being taken by governments towards credits for emissions reduction. He sees the need for a balance between domestic and international action and the use of a full range of domestic opportunities including all sources and sinks. He talked about the particular approach being taken by the Province of Alberta in relation to climate change strategy.

In summary, Mr. Macdonald sees the critical needs as clarity for an emissions reduction credit system for CDM and for actions in Canada. He stressed the importance of the clarification of rules for CDM and sees important opportunities in CDM action.

Question and Answer Session

In the question and answer session, Dr. Mintzer and Mr. Macdonald responded to a number of questions including the following:

- What action should government be taking, particularly in relation to offices to support JI and CDM action?
- What are the CDM opportunities for particular sectors such as the electricity sector?
- What are the options for a portfolio approach or the pursuit of individual projects?
- What are the prospects for the results of the next Conference of the Parties at Buenos Aires in the Fall of 1998 and for 1999?
- What are the opportunities for the oil and gas sector?

Responses:

- The key services of government JI/CDM Offices, in addition to their registry and administrative role, are information sharing and provision of knowledge to build capabilities for action and services to facilitate action and reduce transaction costs.
- Opportunities are seen for JI/CDM action using both the portfolio approach and individual projects; the approach taken determined by the nature and scale of the activity to be undertaken.
- For the energy industry, the opportunities for CDM action are to be found in efficiency improvement projects in existing infrastructure and in technology cooperation actions that will reduce GHG emissions from facilities to meet growing demand.

Panel on Industry and NGO Perspectives

The first member of this panel was Robert Falls, Principal, International Offsets. He talked about Canadian industry experience with AIJ and emerging opportunities in the energy sector for CDM. In reviewing the industry experience, Dr. Falls described a series of initiatives by TransAlta Utilities which characterized the mixed, limited progress that has been made in the past, as a result of the absence of adequate incentives for actions. He talked about a successful project; a project that was initiated but ultimately abandoned; and finally a project which, after two years of work, is still in progress. With these and other examples, Dr. Falls provided a basis for suggestions as to the appropriate means of facilitating projects under the CDM. He described a variety of areas of opportunity in various sectors where technology cooperation can be the means of securing cost-effective international action on climate change through CDM.

Jim Leslie, Program Director, Solutions for Business, International Institute for Sustainable Development, spoke on the subject of CDM and Sustainable Development. His focus was on the imperative of the developing countries for

sustainable development and the opportunity that CDM has to contribute to such development. After reviewing the history of JI and AIJ, Mr. Leslie highlighted the key question which relates to the integration of CDM into the development priorities of the developing world. The prize for such integration is the win-win combination of economic efficiency in greenhouse gas emissions reduction and trade and technology cooperation to support sustainable development in the developing world. He outlined the development aspects of CDM under the headings of capacity-building, technology cooperation, financial flows and the linkage of knowledge to action. He stressed the importance of overcoming the barriers to the achievement of this potential - barriers which exist both in the developed and in the developing world. He referred to the areas of opportunity and application for CDM in contributing to developments in the energy sector, in urban development and in rural development. Finally, he set out a vision for CDM and sustainable development that would include the creation of a new private sector source of funding for sustainable development; the building of new trade and technology cooperation linkages; and enhanced capabilities for cooperative international action on climate change.

Robert Hornung, Climate Change Program Director, Pembina Institute provided an ENGO perspective on CDM. He welcomed the CDM development and he stressed the criticality of good design as it moves into application. He outlined the issues related to CDM including technical issues, baselines, additionality and the criteria to be used for assessing progress in sustainable development. In relation to technical issues, Mr. Hornung referred to the necessary tensions between the desire for broad participation in CDM and the quality of CDM action. He highlighted the difficulties in setting appropriate baselines against which progress would be measured. He outlined the various aspects and measures of additionality in terms of emissions reduction, regulatory requirements, investment technology and business strategy. Mr. Hornung reviewed the various criteria related to the promotion and pursuit of sustainable development and talked of the policy issues that are raised in relation to CDM, in particular the issues of the use of sources and sinks and options for dealing with uncertainty. He reviewed the issue of limits on international action and the various options that have been discussed for such limits.

Question and Answer Session

In the second question and answer session, the panelists (Dr. Robert Falls, Jim Leslie & Robert Hornung) responded to a variety of questions on a number of issues. The questions included the following:

- What are credits from CDM action to be applied against?
- What is the definition of projects that fit within CDM?
- What are the limits on the use of CDM, whether in Canada or globally?
- Should there be an additionality test related to profitability of projects?
- What should be the mix of actions, bilaterally or multilaterally?
- How do we deal with the issues of diversity of projects and diversification of action?

- How do we ensure the creditability and reality of actions taken?
- How do we deal with the problem of transaction costs of CDM action?

Responses:

These questions resulted in a lively exchange of views from the panelists; some questions highlighted the range of differing opinion on some aspects of CDM action. The answers included the following:

- Credits from CDM action will apply to the evolving GHG emissions constraints faced by emitters from their assessment of risks and from Canada's evolving climate change strategy.
- The definition of acceptable CDM projects is provided by the terms of the Kyoto agreement and by the criteria established for projects; future international negotiations will result in further elaboration of this definition.
- There were differences of views on the appropriateness of imposing limits on the use of CDM. It was noted that the scope of business interests and the level of transaction costs will place natural limits of the proportion of CDM action in the action plans of Canadian emitters. Reference was made to the need for the widest possible scope of CDM action and for the pursuit of the most cost-effective action. Support for limits on CDM use was linked to the public acceptability and the employment implications of excessive dependence on international climate change actions.
- There was general agreement about the need for an additionality test to ensure that the emissions reductions benefits of projects are real. There was no consensus on the appropriateness of a test of financial (investment, profitability) additionality.
- The value of a focused bilateral approach as the model for Canadian CDM action was emphasized.
- The critical importance of high quality of CDM projects - in terms of credibility of climate change benefits and their measurability and verifiability - was stressed.
- Transaction costs were recognized as a barrier to CDM action; however, with clarification of rules, economies of scale, aggregation of actions where appropriate and the integration of CDM actions into other business activities, there are prospects for reducing such costs.

The presentations by the various speakers and panelists, and the discussion that they generated, provided an effective springboard for the roundtable discussions that proceeded in the breakout sessions in the afternoon of July 14th. These roundtable discussions were put in context by Jennifer Irish, Deputy Director, Environment Division, DFAIT.

Key Messages - Breakout Groups

Following the breakout sessions, the results of the roundtable discussions were communicated by the three facilitators – Peter Dickey, Jim Leslie and Irving Mintzer.

The key messages from the discussions of the groups are summarized below under the topic headings of the questions posed to participants.

Baselines

- Build on existing Canadian experience
- Use standardized methodologies, customized as appropriate
- Recognize the need for progressive adjustments of the definition of "business as usual"
- Use of sinks must be founded on sound science; baseline criteria for sinks will be similar to those for emissions sources

Projects

- Decentralized, broad-based pursuit of projects
- Maximum flexibility of action
- Inclusion of sinks projects based on the validity of their GHG benefits
- Sound eligibility criteria critical for project credibility
- Use existing processes (eg. ISO) for certification and verification
- Accredit suppliers of certification and verification services
- Should be the result of negotiations among project participants

Institutional Issues

- Use existing organizational structures
- Executive Board to establish performance criteria with delegation of operational functions
- Essential mechanisms include incentives for action, independence of performance evaluation, registry of actions, communication and marketing

Steps towards CDM Action

- Build understanding of the creation, ownership and use of credits from CDM and its linkage with emissions trading
- Enable access to least-cost CDM solutions and opportunities
- COP-4 should define criteria and priorities for projects
- CDM Office services should focus on bilateral agreements, monitoring & verification systems, advice on project selection and, above all, incentives for action

Jennifer Irish closed the session with a further review of outstanding questions and an outline of follow-up plans and actions. She expressed her appreciation for the work of all who participated in the workshop.

NEXT STEPS
Jennifer Irish

- Participants were invited to review the initial foundation paper and charts produced on approaches to the CDM and to forward their views to DFAIT by mid-August.

- It was agreed that the product of the workshop would be transmitted to the federal roundtable covering international emissions trading, the CDM and JI.

- Participants of the workshop interested in participating in the CDM and JI sub-table were invited to contact Jennifer Irish (Chair) and the Climate Change Secretariat.

- It was noted that next steps on the international agenda included the submission of Canadian views to the Secretariat by early September, and the convening of a CDM Ministerial Workshop 24-26 September in partnership with Brazil and Argentina.

- Additional views were welcomed by DFAIT to help further inform Canadian positions.

- Appreciation was expressed to CERI for helping to organize this event, to presenters for sharing their experiences and views, and especially to facilitators, Peter Dickey, Jim Leslie and Irving Mintzer.

WORKING GROUPS

INTRODUCTION OF ISSUES

Jennifer Irish
Deputy Director, Environment Division
Department of Foreign Affairs & International Trade

In this session we hope to take a different track.

Against the backdrop of the informative presentations we have enjoyed this morning, we will ask you to break up into three working groups to focus on some specific questions.

The questions, identified in the issues and opportunity paper, have been identified and coordinated by DFAIT in conjunction with other government experts and negotiators as the most germane to international preparations in the coming period. The issues are divided into three clusters.

The first cluster deals with methodological issues and contains three sets of issues. These deal with issues on:

- How to calculate the basis for determining the reductions accrued by CDM projects additional to any that would otherwise occur. As Robert Hornung aptly emphasized this morning, the initial key to this set of issues is how to calculate project baselines. Informally, we have initially explored a number of innovative ideas away from a project by project approach. These include, for example, benchmarks or standardized baselines for project categories, and the notion of evolving baselines. Robert Hornung categorized possibilities as projects-based, technology-based, sector-based or open market-based. We welcome your ideas and advice, especially those informed by your experiences of what has worked best in practice. On the issue of guidelines, the groups might explore what level of detail is necessary to the credibility. This might be revisited in the discussion of reporting requirements.

- Next are issues related to the projects themselves, including determining what types of projects should be eligible, as well as the criteria and procedures for project certification. Some questions were raised as to what extent sinks should be covered and this could be further pursued here.

- The last set of issues relates to project credits: how these should be determined and used. Determination of credits is closely related to questions on how to calculate baselines and additionality. Robert Hornung outlined a variety of different approaches including emissions reductions, regulatory, investment, technology and business strategy additionality. On the use of credits, the opportunity to sell or hold credits by recipient countries allows them effectively to trade, or bank credits against possible future commitments. These are powerful additional incentives for developing country

engagement: a key factor in a successful CDM. But, as Jim Leslie emphasized this morning, how should this be balanced against the other key factor: providing private sector incentives? The method for sharing project credits becomes especially important in negotiations between investors and recipients.

- On institutional issues, we have taken the position so far that function should precede form. But these issues are pressing to developing countries, which are looking both for an arms-length mechanism, and one which might protect some basic sovereignty concerns. We were fortunate this morning to have benefited from a thorough and comprehensive presentation by Irving Mintzer. This provides a good springboard for further discussion. We would welcome your views in particular on the roles of Executive Board, envisaged by the Protocol, the operating entities. You may also wish to look at different options for minimizing transaction costs, while ensuring basic rules of the game to cover predictability.

- Last and certainly not least, in the third cluster of issues we ask that you focus on some strategic and practical issues. What do we need and when do we need it? What do we need before the year 2000 to ensure that CDM credits can begin to be banked? How should this inform the priorities we take to COP 4? What might be left to subsequent COPs?

- We also recognize that even the best designed CDM will not in itself generate benefits globally and for Canada. It has to be used by the private sector and this, in turn, has links to our domestic actions and implementation strategy. Specifics you might wish to include in your deliberation are expectations for the new CDM and JI office itself. What types of functions would best facilitate the identification and negotiation of projects? What do companies need to do to maximize their preparations and potential benefits? What are the roles of associations and networks of NGOs?

- We will divide into groups and have approximately 2 hours for focused deliberations. Rather than assigning different sets of issues to different groups, we would ask that each group endeavor to respond to all questions. That said, we are going to task each group to begin with a different set of issues. Jim Leslie will facilitate Group Number 1, to begin with methodological issues. Irving Mintzer will facilitate Group Number 2, to begin with institutional issues. Peter Dickey will facilitate Group Number 3, which will address first the steps to operationalize the CDM. The last group will meet here, other groups will meet in the two caucus rooms which are just to the other side of this facility.

- We will then ask the facilitators to report on the work of their groups and briefly discuss the results. Jim Leslie has agreed to do a wrap up, after which I will propose some next steps to build on these results.

THE CLEAN DEVELOPMENT MECHANISM (CDM) : ISSUES AND OPPORTUNITIES - *QUESTIONS FOR DISCUSSION*

Prepared by: Sushma Gera, Senior Economist and Policy Advisor, Environment Division, DFAIT

For the purpose of the roundtable discussion, CDM issues are divided into the following categories:

- Methodological
- Institutional
- Opportunities and practical steps to operationalize the CDM

1. METHODOLOGICAL QUESTIONS

Baselines

- Do baselines have to be calculated on a project-by project basis or can we define standardized baselines for a project category?
- What level of detail is required for the guidelines for preparing the baselines: - generic versus Project, technology, or sectoral level guidelines? Do we need these guidelines?
- How does one deal with evolving "business as usual", given "business as usual" will change over time?
- How might baselines for forest projects and land-use change projects be calculated?
- Are there methodological or other limitations on calculating baselines for forest and land-use projects that might limit the type of projects that could be considered valid CDM projects?

Projects development, evaluation, and approval

- How might projects be identified as potential CDM candidates? What might be respective roles of companies, of the Canadian government, the host government, and the CDM operational entities in project identification?
- What type of forestry and land-use projects should be eligible as CDM projects?
- Do we need eligibility criteria?
- On what basis should the transaction fee (used for administrative costs and adaptation projects) be calculated? Percentage of the certified emissions reductions (which would then be sold), percentage of the value of the investment? Percentage of the emissions reductions, valued at some price?

Criteria and procedures for project certification

- How can emissions reductions be certified and verified?
- What criteria for certification would be necessary?
- Who would have the certification responsibility?

Credits and Trading

- If there is a sharing of the project credits between the investor and the host country, should this be a fixed percentage for all projects; different, but fixed within a type, percentages for different types of projects; something that is negotiated for each project?
- Should developing countries be allowed to trade credits when they are not allowed emissions trading under the Kyoto Protocol?

2. INSTITUTIONAL ISSUES

- What might be the respective roles of the Executive Board and the operating entities?
- What type of administrative arrangements would be efficient and cost-effective?
- What reporting requirements should be there for CDM projects/

3. OPPORTUNITIES AND PRACTICAL STEPS TO OPERATIONALIZE THE CDM

- What type of COP outcome is needed to make the CDM operational?
- What is required domestically to facilitate projects and maximize the benefits of the CDM?

BREAKOUT GROUP #1
Facilitator: Jim Leslie

Methodological Questions

Baselines

Do baselines have to be calculated on a project-by-project basis or can we define standardized baselines for a project category?

What level of detail is required for the guidelines for preparing the baselines: - generic versus Project, technology, or sectoral level guidelines? Do we need these guidelines?

Results of Group Discussion

Group members stressed the critical importance of building on Canadian experience with respect to baseline determination; such experience exists in the PERT, GERT and JI pilot initiatives. They stressed the need to broaden the scope of baseline determination so as to enable action and to avoid stifling initiatives by maximizing the difficulty of baseline determination. They preferred a standardized methodology to baseline determination with the use of current average performance as the basis of determining a "business-as-usual" projection. They noted that standards will need to be customized in particular cases. Such customization must be appropriately justified to preserve the integrity of the system. A distinction was drawn between the determination of baselines for unique, one-off, projects as compared to multiple facilities. It was noted that precedents with respect to baseline determination will develop over time. A systematic approach will use benchmarking wherever appropriate.

Evolving "Business as Usual"

How does one deal with evolving "business as usual", given "business as usual" will change over time?

Results of Group Discussion

After a discussion of the pitfalls and difficulties of defining "state-of-the-art" for the determination of business-as-usual, the conclusion of the group was that business-as-usual must be defined rigorously at each point in time. It was recognized that progressive adjustments will be required over time as technologies and practices change.

Baselines for Sinks

How might baselines for forest projects and land-use change projects be calculated?

Are there methodological or other limitations on calculating baselines for forest and land-use projects that might limit the type of projects that could be considered valid CDM projects?

Results of Group Discussion

Here the group members expressed concern with respect to the basic science related to sinks. However, they agreed that, once the science is clear, the same baseline considerations would apply to sinks as to sources.

Project Identification
How might projects be identified as potential CDM candidates? What might be respective roles of companies, of the Canadian government, the host government, and the CDM operational entities in project identification?

Results of Group Discussion

Group members described the current process of project identification as being more one of "hunt and peck" as compared to a centrally planned process. Their preference was for a continuation of this decentralized, broad-based action for the determination of potential CDM projects. They noted that the availability of CDM becomes part of the screening process used by entities in climate change planning. They noted that each project has to meet basic criteria of validity and credibility. They believe that the emphasis on CDM will be determined by the state of domestic pressure for greenhouse gas emissions reductions. They advocated a maximum degree of flexibility of action so that learning is maximized and further action is stimulated by such learning. The group members did not see a need for international institution involvement in project identification.

Sinks
What type of forestry and land-use projects should be eligible as CDM projects?

Results of Group Discussion

On this question, group members again stressed the fundamental issue of solid science. They noted that the use of sink projects is currently determined by the Kyoto Agreement. In general, the inclusion of sinks projects should be determined by their valid benefits in terms of reduction of greenhouse gases in the atmosphere.

Eligibility Criteria
Do we need eligibility criteria?

Results of Group Discussion

Group members accepted the need for eligibility criteria. They highlighted the need for approved methodology, measurability of impact, verifiability of results,

additionality with appropriate criteria to make it operational and, above all, actions founded in good science. Group members expressed concerns about an approach which would generate lists of approved activities; such lists would be in a state of constant revision.

Transaction Fee
On what basis should the transaction fee (used for administrative costs and adaptation projects) be calculated? Percentage of the certified emissions reductions (which would then be sold), percentage of the value of the investment? Percentage of the emissions reductions, valued at some price?

Results of Group Discussion

There was an inconclusive discussion on this question. Reference was made to the "share of proceeds" terminology in the Kyoto Agreement and to some of the underlining principles.

Project Certification
How can emissions reductions be certified and verified? What criteria for certification would be necessary? Who would have the certification responsibility?

Results of Group Discussion

In the discussion of these questions, fears were expressed about the potential for creating a new international bureaucracy when entities already exist that can deliver the necessary services. Reference was made to the ISO processes through which certification and verification services are being provided through approved service deliverers. A comparison was drawn with the large well-established inspection services that are used for verification and certification of current business transactions. It was noted that the CDM Executive Body could audit and accredit the organizations that provide certification and verification services.

Credits/Trading
If there is a sharing of the project credits between the investor and the host country, should this be a fixed percentage for all projects; different, but fixed within a type, percentages for different type of projects; something that is negotiated for each project?

Results of Group Discussion

On this question there was an immediate consensus that the sharing of project credits should be negotiated between the parties.

Developing countries
Should developing countries be allowed to trade credits when they are not allowed emissions trading under the Kyoto Protocol?

Results of Group Discussion

Discussion of this question led to an exchange of views about the implications of the inability of a developing country to trade credits. It was noted that this would be likely to lead to a developing country exchanging credits for funds rather than banking them for their own potential future use.

Institutional
What might be the respective roles of the Executive Board and the operating entities? What type of administrative arrangements would be efficient and cost effective?

Results of Group Discussion

There was general agreement that the role of the Executive Board is governance and that operational aspects should be delegated to a slim, effective, operating organization. It was noted that maximum use should be made of existing organizations and structures to avoid creating new and excessive bureaucracy.

Reporting
What (level, stringency vs transaction costs) reporting requirements should be there for CDM projects?

Results of Group Discussion

Group members agreed that the reporting to government should include information on CDM transactions and the ongoing results of such transactions. Concerns were expressed with respect to the potential for excessive complexity in reporting and its implications for transaction costs.

Practical Advice
What advice would you give for the policies and programs of the Canadian JI/CDM Office? What do CDM participants need?

Results of Group Discussion

Discussion of these questions centered on the need to create incentives for action. The need for coordination assistance to support project identification was stressed. Particular reference was made to initiatives for bilateral arrangements between Canada and selected countries, the need for country studies to provide a basis for private sector initiatives and the value of a focused Team Canada approach. The Canadian JI/CDM Office should effectively communicate the policies and conditions of CDM. It should provide a technical support function to assist companies in moving into action. It should be a clearing house for information for Canadian participants in CDM and it should provide a registry and reporting role in respect of all Canadian CDM actions.

BREAKOUT GROUP #2
Facilitator: Irving Mintzer

Institutional Issues

Summary

- Establish project registry.
- Set-up apparatus for project certification.
- Help investors find projects.
- It is useful to think about the structure of the CDM regime even before the details on operational guidelines are sorted out.
- Note: Canada needs maximum flexibility, especially because we do not have a definition for CDM.

What might be the respective roles of the Executive Board and the operating entities?

- One possibility is to go with existing structures to avoid duplication.
- International board vs. Individual country boards.
  - Executive Board should be responsible for performance based criteria, plus an international audit board (no full agreement on the international board).
  - World Bank may have a place as a possible existing, international structure. (Majority disagreed with World Bank due to credibility problems, but some agreed to an existing structure)
  - Alternatively, the regime could have a certifying agency in each country.
- A model that allows the Executive Board to develop a secretariat is essential and really the only thing we can do. (Agreed with by most, but not as essential)
- An existing structure may already be able to ensure equitable relations and gains for the developing world.
- What about involving the private sector in negotiations? (Most felt it was very important)
- Standardization for multiple projects cannot work; negotiations (multi-lateral/bi-lateral) are necessary. (Half the group felt we should start with groups (countries) with which we already have positive relations.)

What institutional mechanisms are needed to ensure credibility of CERs at the national level?

- Incentives are necessary for the private sector.
- Independent body for monitoring, evaluation, etc.
- Registry function - registered credits and national inventory link - linkages between firm to government registry, national inventory, etc. (The idea was agreed upon, although structure was not)
- Marketing, as soon as a couple of regulations are in place, and the entrepreneurs can make this work.
- Third-party verification. (This is a possible function of the executive board.

- Private sector should be very involved in all facets of regime development.
- Separate, not omnipotent bodies are needed, roles for all representatives.

Goals for CoP 4

- Design basic institutional structure.
- Maintain flexibility.

Is there a perceived sense of urgency on where we should be by CoP4?

- Boundaries and priorities should be outlined:
  - Eligibility; and
  - Project Criteria.
- We have 2 years to get private sector on board, work on criteria in this time frame.
- "CDM is the tail that will wag the fire, as soon as the dog is identified." The Montreal Protocol is a good starting point, and other details can be manipulated within this context. A board could be developed through this. (No 'majority' agreement - only some of the group)
- Simply need assurance that compliance by Canadian national companies will be rewarded. We need a signal from the federal and provincial governments on this.
- Need to build a system of 'credible credits' -- credits that can be applied to real or expected requirements faced by companies (e.g., domestic tax liabilities or regulatory requirements). This is how to engage the private sector. Therefore, 'credible credits'.

What comes first: method or institutional?

- What is established in 2000 is not the end, it will continue to evolve.
- Research on models of processes equivalent to CDM is useful, as a way to illuminate examples of pros and cons.
- Need to ensure commercial viability - look at projects that are already there and look at CDM viability and feasibility.
- Should concentrate on demand side as much as supply side.
- Build on existing bilateral relationships.
- No definitive answer to this question apparent.

BREAKOUT GROUP #3
Facilitator: Peter Dickey

Opportunities and practical steps to operationalize the CDM

1. What type of COP outcome is needed to make the CDM operational?

2. What is required domestically to facilitate projects and maximize the benefits of the CDM?

Major Issues

A number of major issues were identified which were felt to be necessary in the development of Canada's position on the types of COP outcomes needed to make the CDM operational. These include answering the following questions:

- What are Canada's strategic priorities and opportunities for the CDM?
- What does Canada want from the CDM?
- What are the various developing country priorities from the CDM?
- What agreements do we think are possible from the COP process?
- What relationship and alliances will be important?

These questions should be dealt with on a priority basis.

CDM Issues

The discussion lead to additional questions and issues before focussing on the main workshop questions. These included:

- Who can participate in the CDM; government agencies, companies?
- What will count as a CDM project?
- How will credits be used domestically?
- How will credibility be maintained?

The understanding of credit from the CDM, their generation, ownership, and use will be very important to the effectiveness of the CDM and its linkage with a trading system.

CDM Priorities

Having identified these key issues and questions, the conversation turned to the CDM and priorities for Canada. We settled on a single statement that the CDM should provide:

- Access to least cost solutions and business opportunities that can be pursued by Canadian organizations.

We elaborated further by describing some of the conditions and characteristics of the CDM as follows:

- The CDM actions should result in emission reductions which are; eligible for credit, can be banked and are acceptable for use in a potential future compliance period by the participants.
- Bilateral agreements should be in place to facilitate and support actions by project participants
- Low transaction costs will be required to encourage maximum participation by the private sector. This will be assisted by building on existing infrastructures and known processes (e.g. qualifying Third Parties to audit as per that used in the ISO 14000 management systems)
- The private sector should be able to participate directly through a variety of mechanisms. The market and needs of participants will determine the methods.
- The rules should be clear and readily understood with predictable outcomes built in. This could include prescribed time lines for decisions in the approval process.

Some participants felt that, in parallel, with these negotiations, it would be necessary to demonstrate positive progress by developed countries in addressing their domestic emissions situation.

In developing the rules for the CDM we should remember the line used by both Jim Leslie and Robert Hornung "perfection is the enemy of the good."

CDM Office

To complete our deliberations, we turned to this question: What services should be proivded by the new CDM office in DFAIT? Once again we described a number of characteristics and services including:

- Putting in place bilateral agreements including identifying preferred CDM countries along with providing country assessments. In country DFAIT staff should be familiar with the CDM. They should provide assistance to Canadian organizations as they pursue the development of CDM projects.
- The CDM office should provide advice on the types of CDM projects that are acceptable as well as the types of project that are priorities for identifying countries. The office should also advise on the scope of sustainable development characteristics to be included in CDM projects.
- Assistance to CDM project proponents in the form of joint development of measurement, verification and monitoring protocols and systems would have value. The office should be a partner with the proponent to help obtain certification and to streamline the approval process.
- The office can work with participants and other agencies to ensure that suitable incentives are in place to encourage maximum participation.
- There will be an ongoing role for the office on the international front. One example could be the negotiations of "pre approved" types or categories of projects to lower transaction costs. These should reflect Canadian priorities for technology and services.

The only thing that limited the participation of members of the group was time. We ran out of time long before we ran out of ideas.

CDM WORKSHOP

OTTAWA, ONTARIO

JULY 14, 1998

OPENING REMARKS

BY

PAUL HEINBECKER

ASSISTANT DEPUTY MINISTER

GLOBAL AND SECURITY POLICY

On behalf of the Department of Foreign Affairs and International Trade, it is my pleasure to welcome you to this workshop on the Clean Development Mechanism. I would like to thank CERI for having agreed to organize this event and for agreeing to help facilitate the discussions. I also wish to express my gratitude to Sushma Gera of our Environment Division for the hard work she has invested in this initiative.

- I am heartened to see that this issue has been able to attract so much attention by our important partners. As providers of technology, private investment, development assistance, policy guidance, and project facilitation, your work here and in the future will, I am sure, provide a meaningful contribution to our emission reduction efforts.

- Last night you received from Richard Kinley of the convention's secretariat the difficult negotiating history behind this initiative. Here, I focus rather on some brief remarks about Canadian interests and involvement to set the context for your discussions.

(Backdrop: cost effectiveness)

- In the lead-up to Kyoto, Canada attached great importance to

effective marked based international mechanisms to ensure that our environmental obligations would be able to be achieved at least cost. Instruments we were looking for were emissions trading, and credits for Canadian-financed projects abroad that would reduce emissions for everyone's benefit.

- Indeed, we regard the mechanisms as completely integral with the remainder of the Kyoto package, including the targets themselves.

- The rationale behind this approach was simple. Effective sustainable development strategies are based on the merging of environment, social and economic factors. An ambitious international response was required at Kyoto to tackle growing emissions and their impacts on the planet. But, in return, we needed assurance that cost effective instruments would be available to meet our obligations -- both domestically and internationally.

- Some disparaging things have been said about emissions trading and projects for credit agreed to at Kyoto.

- But in Canada's view, there is nothing untowards about wanting to keep costs down. There are no resources to waste.

- The attractiveness of the CDM from an economic viewpoint is

therefore compelling.

- No doubt, in the early stages of our mitigation efforts, the "low hanging fruit" will go first. But once these are exhausted, and the price of the carbon rises domestically, international options will become more.

- Much has been made of the merits of emissions trading. And for good reason. But I am fearful that the projects-based mechanisms risk becoming "poor cousins". In our search for implementation options, I remain convinced that the CDM, and joint implementation, fit well with what Canada has to offer in terms of energy production expertise and environmental technologies.

(Backdrop: development)

- Lest I sound too much like an accountant, let me emphasize here that the CDM is not just a way of controlling the costs of mitigation. With a target that is equivalent to roughly a 20 percent perhaps 25 reduction by 2012, a successful Canadian implementation strategy will in large measure depend on effective and credible domestic actions. That is not my job. But it is my job to work to persuade,over time, developing countries to become more engaged in global climate change solutions. (It is, therefore, a toss-up as to whether David

Oulten or I drew the short straw).

- Efforts will continue to build a step-by-step approach at home and abroad to engage developing countries more formally in commitments. But it is equally important to ensure that commitments notwithstanding, developing countries be encouraged to undertake actions that will contribute to their development while reducing emissions.

- Developing countries are skeptical. They will want to be assured that the development dimension in sustainable development is truly there for them. They will also want to be assured that they will attract technologies that make as much sense for their own development as for the global environment.

(The CDM Challenge Defined)

- Against this backdrop, the CDM emerged as a compromise at Kyoto. Developed countries had an interest in ensuring a cost effective projects instrument that could be used as a source of credits and possible expanded markets. Developing countries had an interest in securing technology transfers. But is it workable?

- Unlike its cousins, emissions trading and joint

implementation, the CDM is a new creation. Negotiating targets was politically difficult, but negotiating of details is no less taxing. It was clear at Bonn that the road ahead is going to be slower than we hoped.

•

(The agenda)

- This morning you will have the benefit of sharing experiences and discussing possible options for proceeding. This afternoon, we will frame some specific questions to help focus debate. Both methodological aspects of the mechanism and institutional. There are some papers to help frame your deliberations.

(Backdrop to objectives)

- I hope this conference is not treated too much as an academic exercise. By the end of the summer, Canada must formally submit its views on the CDM to the secretariat. Later in September, Canada will host along with Argentina and Brazil a Ministerial level conference on the CDM.

(The new office)

- We need practical advice. Th Department of Foreign Affairs

and International Trade will be the home of an office to facilitate CDM and joint implementation projects. We hope to have the basics of an office up and running in the autumn. The Department's expertise in international climate change policy, development policy, market identification, technology and trade promotion will be mobilized to make this initiative is a success. But it also depends on your interests, your involvement, your commitment and your ideas.

- Thanks for your attention and participation this morning. I wish you all the very best in your deliberations today and look forward to using the results.

(Introduction)

- Au nom du ministère des Affaires étrangères et du Commerce international, je suis heureux de vous accueillir à cet atelier sur le Mécanisme pour un développement « propre ». Je voudrais d'abord remercier le CERI d'avoir accepté d'organiser cette rencontre et de faciliter les discussions. Je veux aussi exprimer ma reconnaissance à Sushma Gera de notre Direction de l'environnement pour la somme de travail qu'elle a investie dans cette entreprise.

- Je suis encouragé de constater que cette question a pu retenir à ce point l'attention de nos grands partenaires. À titre de fournisseurs de technologie, d'investissement privé, d'aide au développement, de conseils en matière de politique ainsi que de facilitateurs de projets, votre travail ici même et à l'avenir contribuera significativement, j'en suis sûr, à nos efforts de réduction des émissions.

- Richard Kinley, du secrétariat de la Convention, vous a fait part hier soir des difficiles négociations qui ont entouré cette initiative. Je me propose aujourd'hui de faire quelques observations sur les intérêts et la participation du Canada, pour donner un contexte à vos discussions.

(Rentabilité)

- Durant ses préparatifs en vue de la conférence de Kyoto, le Canada a attaché une

grande importance à des mécanismes internationaux axés sur l'économie de marché qui soient efficaces et nous permettent de nous acquitter de nos obligations environnementales au moindre coût possible. Au nombre des instruments que nous recherchions figuraient l'échange de droits d'émission, et l'octroi de crédits dans le cas de projets financés par le Canada à l'étranger qui diminueraient les émissions à l'avantage de tous.

- En fait, nous considérons ces mécanismes comme des parties intégrantes de l'ensemble de mesures convenues à Kyoto, y compris les cibles elles-mêmes.

- Le raisonnement derrière cette approche était simple. Les stratégies de développement durable efficaces sont basées sur la convergence des facteurs environnementaux, sociaux et économiques. À Kyoto, il s'imposait de s'entendre sur un ambitieux plan d'action international qui permettrait de s'attaquer au problème des volumes croissants d'émissions et à leur impact sur la planète. Mais nous devions par ailleurs avoir l'assurance de disposer d'instruments rentables pour nous acquitter de nos obligations -- nationales et internationales.

- Certains ont critiqué l'échange de droits d'émission et l'octroi de crédits pour certains projets -- des instruments sur lesquels les participants se sont entendus à Kyoto.

- Mais, de l'avis du Canada, il n'y a rien de mal à contenir les coûts. Il n'y a pas de ressources à gaspiller.

- Le MDP, d'un point de vue économique, est donc très attrayant.

- Il ne fait pas de doute que, dans les premiers stades de nos efforts de réduction, les options les plus accessibles auront la faveur. Mais une fois que ces options auront été épuisées et qu'aura augmenté le prix du carbone au plan national, les options internationales présenteront plus d'attraits.

- On a fait grand cas des avantages de l'échange de droits d'émission. Et à raison. Mais je crains que les mécanismes fondés sur les projets ne deviennent les « parents pauvres ». Dans notre recherche des options de mise en oeuvre, je demeure convaincu que le MDP, et la mise en oeuvre conjointe, cadrent bien avec ce que le Canada a à offrir en termes de compétences en production d'énergie et en termes de technologies environnementales.

(Développement)

- Mais je ne voudrais pas avoir trop l'air d'un comptable. Permettez-moi de souligner que le MDP n'est pas seulement un moyen de contrôler les coûts de la réduction. Avec une cible qui équivaut à une réduction d'environ 20 % et même peut-être de 25 % d'ici l'an 2012, le succès de la stratégie de mise en oeuvre canadienne dépendra dans une large mesure d'actions efficaces et crédibles au pays même. Cela n'est pas de mon ressort. Ma tâche est d'arriver à persuader les pays en développement de s'engager davantage en faveur de solutions au problème du changement climatique mondial. (Il

n'est donc pas clair si c'est David Oulten ou moi qui a tiré la courte paille.)

- Les efforts se poursuivront pour mettre en place une approche progressive aux plans national et international en vue d'amener les pays en développement à s'engager de façon plus formelle. Mais il est tout aussi important de s'assurer qu'au delà des engagements, on encourage les pays en développement à adopter des mesures qui contribuent à leur développement tout en réduisant les émissions.

- Les pays en développement sont sceptiques. Ils voudront aussi l'assurance de vraiment avoir accès à la dimension « développement » du développement durable. Ils voudront aussi l'assurance qu'ils attireront des technologies qui servent autant leur propre développement que l'environnement mondial.

(Définition du défi présenté par le MDP)

- Dans ce contexte, le MDP est apparu comme une formule de compromis à Kyoto. Il était dans l'intérêt des pays développés de s'assurer d'un instrument de projet rentable qui puisse servir de source de crédits et d'accès à de nouveaux marchés. Il était dans l'intérêt des pays en développement de s'assurer des transferts de technologie. Mais ce mécanisme peut-il fonctionner?

- À la différence de ses cousins, l'échange de droits d'émission et la mise en oeuvre conjointe, le MDP est une nouvelle création. S'il a été difficile politiquement de

négocier des cibles, il ne l'est pas moins de négocier les détails. Il est apparu clairement à Bonn que les progrès seront plus lents à venir que nous l'aurions espéré.

(Le programme)

- Ce matin, vous pourrez partager vos expériences et discuter des options qui s'offrent pour aller de l'avant. Cet après-midi, nous formulerons des questions spécifiques qui aideront à focaliser le débat. Tant les aspects méthodologiques du mécanisme que le thème institutionnel. Il y a certains documents qui aideront à encadrer vos délibérations.

(Objectifs)

- J'espère que cette conférence ne sera pas trop « académique ». D'ici la fin de l'été, le Canada doit officiellement faire connaître ses vues sur le MDP au secrétariat. Plus tard en septembre, le Canada coparrainera avec l'Argentine et le Brésil une conférence ministérielle sur le MDP.

(Le nouveau bureau)

- Nous avons besoin de conseils pratiques. Le ministère des Affaires étrangères et du Commerce international abritera un bureau qui facilitera les projets de MDP et de mise

en oeuvre conjointe. Nous espérons que les opérations de base seront en place à l'automne. Les compétences du ministère concernant les politiques internationales relatives au changement climatique, les politiques du développement, l'identification des marchés, la technologie et la promotion commerciale seront mises à contribution pour assurer le succès de cette initiative. Mais ce succès dépend aussi de votre intérêt, de votre participation, de votre engagement et de vos idées.

- Je vous remercie de votre attention et de votre participation ce matin. Je vous souhaite des délibérations des plus productives aujourd'hui et j'anticipe d'en mettre à profit les résultats.

The Kyoto Protocol - Flexibility and Credibility

Presented by
Richard Kinley
Coordinator, Resources, Planning & Coordination
UNFCCC Secretariat

When Sushma Gera called and asked me to speak at a workshop on the Clean Development Mechanism my first reaction was "You've got the wrong person". Having been well outside the frenzy of international activity surrounding the CDM, over the past six months, I did not feel that I would have much insight to offer. But Sushma assured me I didn't need to know what I was talking about -- or at least didn't need to be an expert -- and the chance to come back home and spend some time with old friends was too good to pass up.

Tomorrow's discussions will focus on details of the CDM and how it might work. I thought we might use tonight to look at the Kyoto Protocol more generally -- what does it mean? -- and then leave you with a few thoughts on the CDM to reflect on overnight. I will try to be provocative but not so much as to get John Drexhage mad at me. The themes I would like to highlight are flexibility and credibility.

Let's start with the Kyoto Protocol. One could say that it was conceived in the back rooms of the Berlin Messe at COP 1. One of the proud parents was Doug Russell. The gestation period lasted two and a half years -- through eight sessions of the Ad Hoc Group on the Berlin Mandate under the chairmanship of Ambassador Raul Estrada-Oyuela, the hero in this endeavor. Looking back, rarely has so much effort been invested for so little substantive result. Yes, there were procedural advances through the AGBM, but when we got to Kyoto every major issue was still outstanding. This was taking the old negotiating adage "nothing is agreed until everything is agreed" a bit far!

Who, at any point in the 2 1/2 years of the AGBM, and even more so on the first day of the Kyoto Conference, would have predicted that eleven days later there would not only be a Protocol, but that it would be recommended unanimously for adoption?

So what happened? Well, a deal was done. I would like to walk through what I see as the four main components of this Kyoto package deal.

The most obvious piece of the puzzle are the **legally-binding emission targets** for Annex I Parties. The varying interests of Annex I Parties were reflected through several features -- most importantly differentiation of targets, but also 6 gases, some sinks, flexibility for transition countries, a bubble and an umbrella and deadlines for review of the whole Protocol.

The second element of the "deal" were the so-called **flexibility mechanisms** -- JI, international emissions trading, and the CDM -- and the effort to promote a prompt start of those mechanisms. These mechanisms were essential for some, including Canada, and highly problematic for others, especially international emissions trading. But nevertheless, they are part of the package deal and now need to be elaborated.

Third, there is the decision relating to **Article 4.8 and 4.9** of the Convention, and the similar articles of the Kyoto Protocol. These relate to the impacts of climate change and of response measures on vulnerable Parties. I have to admit that the importance of this part of the "deal", especially for the oil exporting countries, was not recognized at first, at least not by me. It is now all too clear, as are the parallels that are being drawn between work on this question and work on the flexibility mechanisms.

The fourth, and final element of the package relates to what **developing countries** got at Kyoto. This is not so straightforward. There are the potentially significant new investment flows under the CDM. Developing countries also achieved some additional scope for funding of adaptation -- perhaps through the financial mechanism and also through the CDM. The most important political outcome for developing countries, however, was their success in turning back any expansion of commitments to include additional Parties -- whether on a voluntary basis or otherwise.

(If I might open a parenthesis here, this issue of commitments for additional Parties has not gone away. Jennifer Irish can attest to that having refereed the most recent skirmish in Bonn last month. But one question that Parties, and commentators like Irving Mintzer, might want to reflect on is the implications of the CDM, and the resulting projects, on the ability and willingness of large developing countries to take on quantitative commitments. Let me close at the parenthesis there).

Returning to the deal made in Kyoto, one can ask how it should be assessed. Admittedly the secretariat is not the most neutral observer but we left Kyoto satisfied, even surprised, by the result. We continue to believe that the Kyoto Protocol is an historic step forward. However, the decisions that have to be made in the coming years, especially about the implementation of the flexibility mechanisms, will be crucial to the credibility of the process and should not be allowed to water down the achievement.

The Protocol will have an important environmental impact. While the 5% collective reduction by Annex I Parties may seem modest, looking at the required effort reveals a different picture. If commitments are fully implemented, Annex I emissions will be almost 30% below what they would otherwise have been.

Another measure is the economic impact or rather the economic signal being sent. In this context, I think it is fair to say that the Kyoto Protocol is more an economic agreement than an environmental one. Through its impact on technological innovation, efficiency standards and consumption patterns in energy and transport, the Kyoto Protocol will influence the global markets of the 21st century. And we should

bear in mind that the Protocol is in the process of creating new commodities and new markets through its flexibility mechanisms.

At the outset I said I wasn't a CDM expert but, in the fine tradition of multilateral diplomacy, I won't let that stop me from saying a few things about it.

The CDM emerged from negotiations between governments. It was not an initiative of the Chairman (in fact quite the contrary) and the secretariat was not involved in supporting the negotiating group. That group report back to the Committee of the Whole in the closing hours of the negotiations, as the sun was rising and eyelids were sinking, and the agreed CDM was incorporated in the Protocol text without too much fuss.

The CDM has a dual purpose, constituting a commodity of interests: to assist Annex I Parties in achieving compliance with their emissions commitments -- which tends to be the focus in developed countries, and in meetings like this -- and to assist non-Annex I Parties in achieving sustainable development.

This latter purpose was underlined repeatedly by developing country delegates at our recent meetings in Bonn. A lesson in this is that when discussing the CDM and projects with developing countries it might be advisable to focus on the contribution to sustainable development in a country before getting to the details of the certified emission reductions.

The CDM is one of the mechanisms that provides flexibility in the achievement of commitments. However, I would like to emphasize that this "flexibility" should not be expanded from the mechanisms to their accounting systems. On the contrary, the Protocol requires credible and rigorous systems for accounting -- with no "fudging" the numbers. This is especially true for the CDM because it reaches outside Annex I and needs greater quality control.

The Kyoto Protocol, as an economic agreement, has to pay attention to accounting details. Similarly, one can learn from the realm of finance and establish a system where the functions of financing and auditing are separate and not assigned to the same institution.

What would a discussion about the CDM be without a word about "supplementarity". This is an important issue and cannot be pushed aside. However, it may be possible to leave it until a later stage in the process and focus in the early days on questions such as project eligibility, baselines and additionality and reporting and accounting. Progress on these points may build confidence in the mechanism and the process and thereby facilitate the resolution of the more political question of supplementarity.

One final point regarding the CDM -- how risky is early action before the rules of the game have been set? The political deadline for setting these rules, so that the CDM can be operational from the year 2000, is COP 5 which is currently scheduled for late

1999. Moving ahead before these rules are clear though, does involve some risk. Some transactions could turn out to be ineligible once the rules are established. However, if investors are aware of this it can be factored into plans.

In conclusion, I would like to underscore credibility as the partner of flexibility. Credibility has many facets:

- Strong national systems for the estimation of emissions and removals,
- the design of the JI, CDM and international emissions trading regimes,
- a rigorous certification process, and
- effective non-compliance procedures.

These will help to define the credibility, the seriousness and the respectability of the Protocol and its Parties.

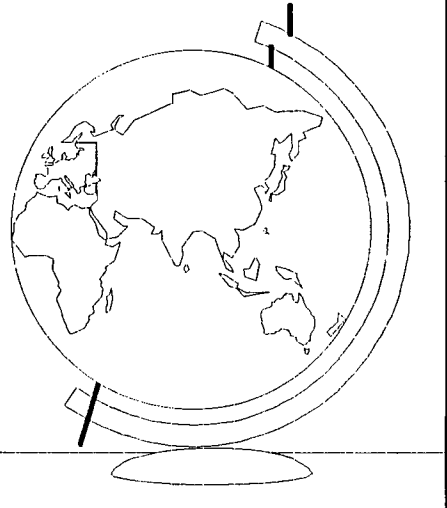
But credibility also has another more political component. I consider it very important that there be an enlightened combination of domestic and offshore action. Wholesale offshore purchasing of emission reductions will not enhance the credibility of the climate change regime. It will also have the perverse result of promoting investment in the efficiency and modernization of other economies and of competitors. The result will be that longer-term trends in emissions will not change, thereby consigning those who opt for such a strategy to a destiny of technological obsolescence, comparative inefficiency and non-competitiveness. It will also mean that commitments by non-Annex I Parties will be put off further into the future.

The Kyoto Protocol sets the stage for potentially significant change. Annex I Parties, including Canada, know what their emission limits are for the five years from 2008 to 2012. There was a reason for setting the commitment period 10 years into the future. That reason was not delay, but to allow the time necessary for a shift to more sustainable modes of production and consumption. To make the changes necessary to meet these commitments, Annex I Parties need to start now to plan and implement the policies and measures that fit their national circumstances.

In conclusion, I would like to thank the organizers of the workshop for inviting me to be here. I am looking forward to tomorrow's proceedings and to lots of corridor conversations.

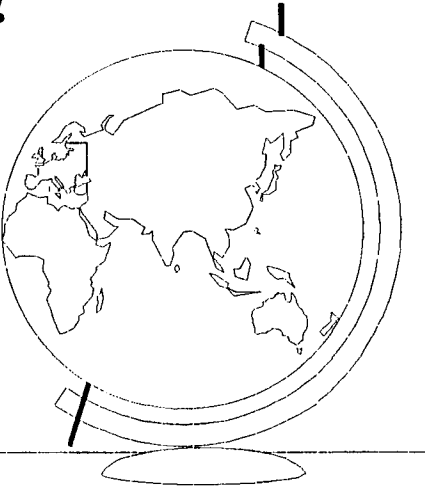
Institutional Issues Related to Implementation of the CDM

Irving Mintzer
Pacific Institute for Studies in
Development, Environment and Security
14 July 1998



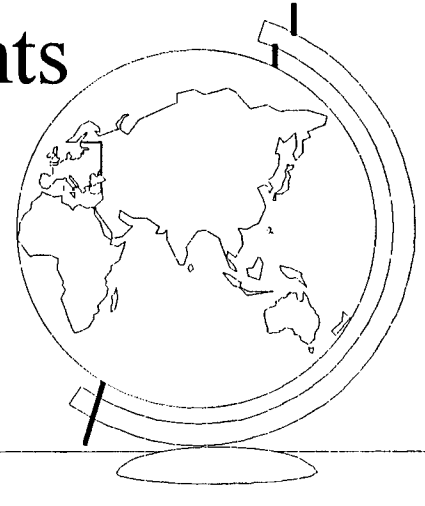
Key Questions About the CDM

- What is it?
- What is it for?
- Who can participate?
- What happens to the proceeds?
- How might the regime be organized?
- How will we know if it worked?



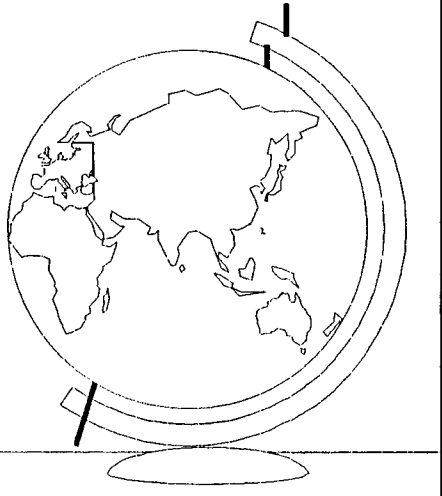
How might the regime be organized?

- The CDM might be simply a collection of bilateral activities, an aggregation of individual joint venture projects.
- The CDM might be a fundamentally multilateral, portfolio-based mechanism.
- The CDM might incorporate elements of both models.



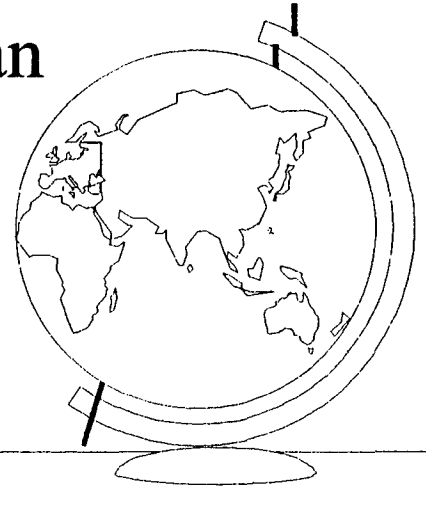
What is the role of the Executive Board of the CDM?

- The Executive Board might share a consultative responsibility with the Subsidiary Bodies of the Convention.
- The Executive Board might have an operational responsibility to select projects for financing.
- The Executive Board might review projects for certification.
- The Executive Board may establish criteria for the operational entities of the CDM.



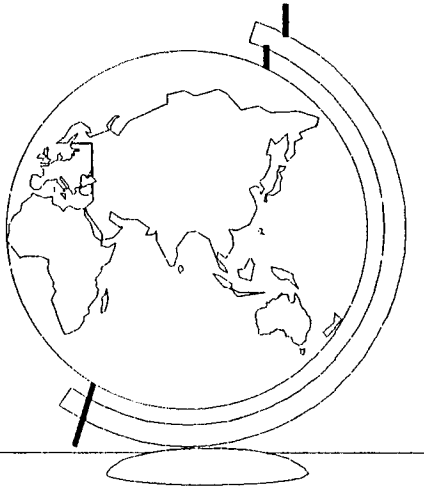
Where should the operational responsibilities be located within the CDM regime?

- Responsibilities for brokering partnerships, certifying project designs, monitoring project performance, verifying project accomplishments and evaluating project success should be co-located in one institution.
- Responsibilities should be dispersed to the regional level, vested in any entity that can meet performance criteria established by the Executive Board.



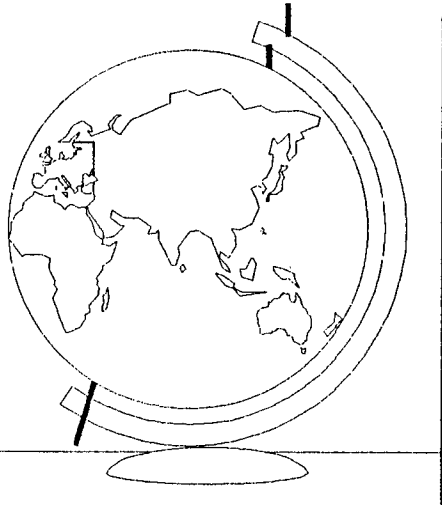
How can the CDM regime be designed to ensure that capacity building and sustainable development components are part of all projects?

- Leave it to the project developers.
- Require it as a condition of project certification.
- Make it a condition of acquiring host-country approval for CDM projects.



How will we know if the CDM regime is a success?

- By the scale of the investment flows
- By the size and cost of emissions reductions
- By the average per ton transaction cost
- By the degree of enthusiasm with which the process is embraced by developing countries
- By the success of capacity building activities



Relationship Between Credits for Early Action and CDM & Provincial Opportunities

Presented by
Don Macdonald
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Presented at the

Clean Development Mechanism Workshop

July 13-14, 1998

Relationship Between Credits for Early Action and CDM & Provincial Opportunities

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Alberta Department of Energy

Overview

- Credit for Early Action
- Firms: Investment Risk, Credits and CDM
- Govt: Climate Change Targets
- Provincial Opportunities & Perspective

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Credit for Early Action

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Credit for Early Action

- For firms:
  - to ensure GHG investment risk for projects is minimized.
  - to ensure that they will not be penalized or suffer an unfair competitive advantage by going first.
- For government:
  - catalyst to industry to make further GHG reductions in a voluntary, pre-regulatory regime
  - future obligation that early industry investments will be formally recognized towards "future compliance obligations"

Alberta Department of Energy

Credit for Early Action: Emission Reduction Credits

- Three important aspects:
  - firm to firm buying and selling of carbon credits as a commodity (hedge against future government regulations)
  - a government recognized GHG reduction that can be "credited" against FCCC target obligations and reflected in national inventories
  - will be formally recognized by the international parties to the FCCC

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Credit for Early Action

- Credit for Early Action system approved in Canada by JMM in April 98 - Issue table underway now.
  - An early start with the GERT Pilot in which traded credits in Canada will be "credited"
- Credit for Early Action system also being developed in the U.S. - principles to be announced by the President this month (?)
  - based on an proportional allocation of the U.S. Kyoto Target

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Firms: Investment Risk, Credits and CDM

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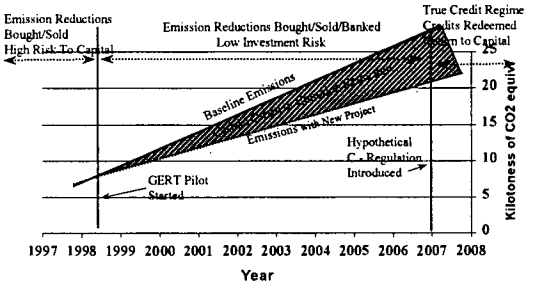
Project-Based Carbon Credits



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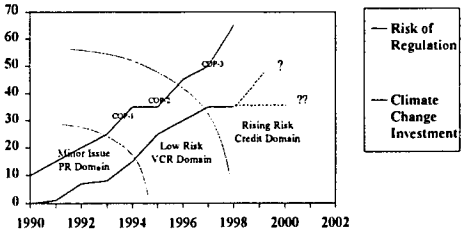
Firms: Risk of Regulation and GHG Investments



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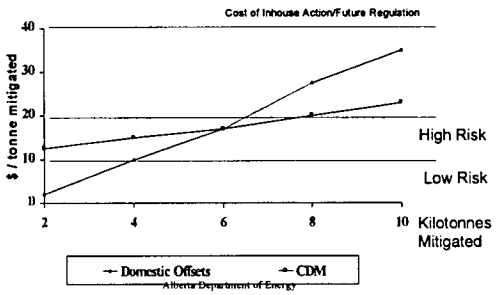
Regulatory Risk Reduction



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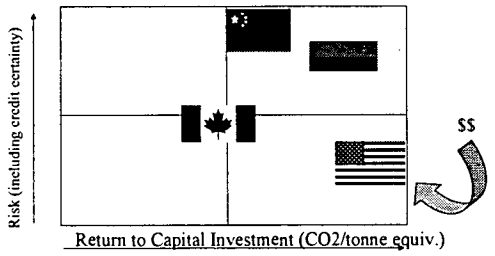
Investor Flow of Capital



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Govt: Climate Change Targets

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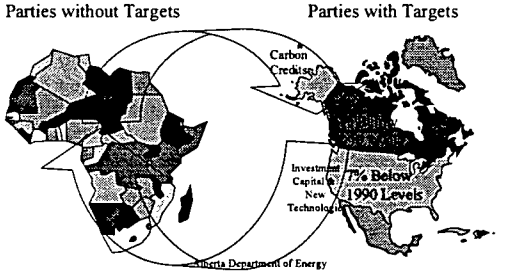
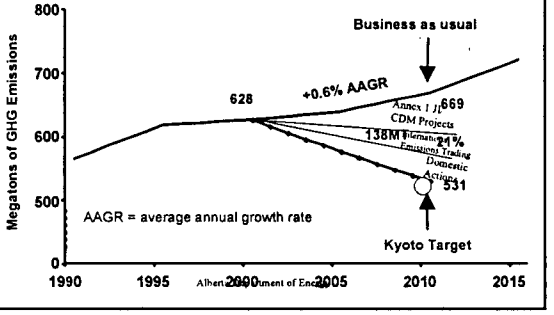
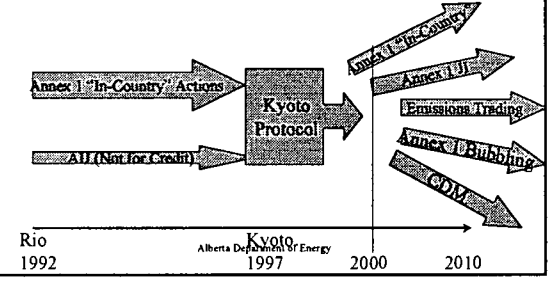
CDM: A New Commerce in Certified Emission Reductions



Project-Based Credits that are "Creditable" against National Targets



Flexibility Elements: Confusing Rules Leading to the 2 Year "Wait and See" Investment Gap



Canadian CDM Efforts

- Two prong approach:
  - Kyoto rules clarification (1998)
  - Project development (1999-2000)
- Make it a serious effort this time ($1-2M minimum, adequate staffing, follow-up on bilaterals, capacity building for developing countries including inventories)
- Don't start until you are serious and have the resources to follow-through.
- Our CDM capacity has to be as good or better than other Annex 1 and developing country efforts or we won't be "CDM competitive".
- Credit sharing (ownership of CER's) must be crystal clear to potential private sector investors in both the "CDM host" country AND in Canada.
- Needs careful coordination with other flexibility elements - CDM will have to compete with the other flexibility elements for investor capital.

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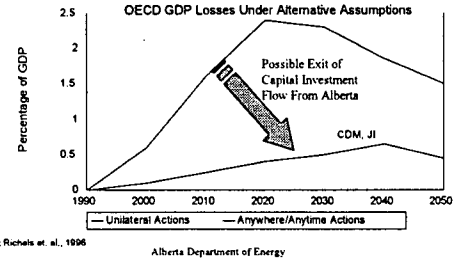
Provincial Opportunities & Perspective

Alberta Department of Energy

The Double Edged Sword of CDM and Flexibility Elements



Modified from: Richels et. al., 1996

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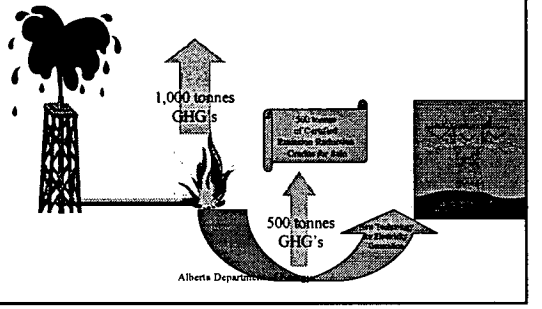
CDM Opportunities: Building Upon Alberta's Oil & Gas Expertise



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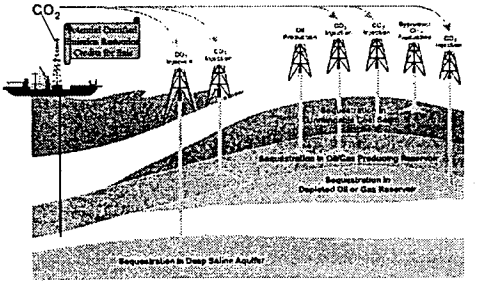
CDM Opportunities: Geological Sequestration & Technology Transfer



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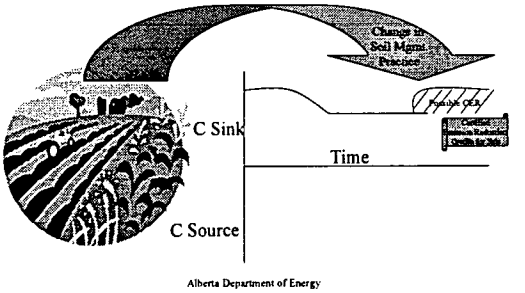
CDM Opportunities: Building On Agricultural Expertise in Alberta



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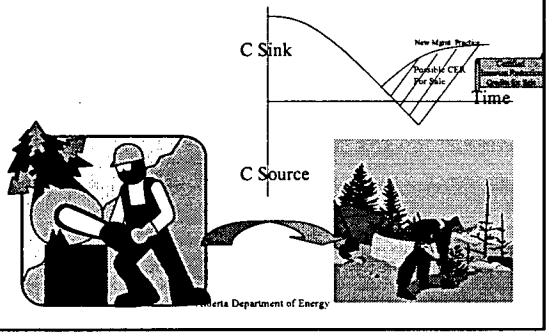
CDM Opportunities: Building Upon Forest Sector Expertise



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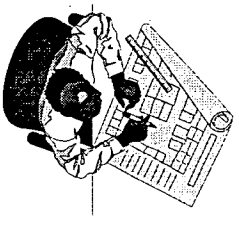
CDM Opportunities: Human Resource Expertise

- Regulatory experience in oil & gas
- Energy infrastructure
- Technical expertise in environmental management & emissions inventories
- Project management capability
- Knowledge- based (information technology)



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Provincial Perspective

- CDM offers a lot of opportunities for Alberta, but many problems need to be overcome.
- Concern over the possible exit of capital investment out of Alberta.
- Disappointment with the federal commitment on JI to date.
- Willing to support renewed Canadian CDM efforts, but need a strong federal "commitment" signal.
- Desire to have provincial input to Canadian negotiating position on CDM and other flexibility elements.
- An effective global CDM program will probably be the best way to attract non-Annex I parties into accepting initial voluntary targets within the protocol.

Alberta Department of Energy

Key Points

- We must have a clear credit system in CDM host countries AND IN CANADA if this is to be successful.
- Governments have an obligation to work rapidly to clarify the CDM rules in the Kyoto Protocol before any meaningful project work can begin.
- Alberta sees a lot of opportunity in CDM and is willing to work to support CDM, but wants a clear commitment signal from the federal government (including adequate resources).

Alberta Department of Energy

"Joint Implementation" and the "Clean Development Mechanism"

Opportunities and Experiences

Presented by

Dr. Robert Falls
Principal
International Offsets Inc.

Presented at the

Clean Development Mechanism Workshop

July 13-14, 1998

"Joint Implementation" & the "Clean Development Mechanism"

Opportunities and Experiences...

Presentation Overview

- experience of *TransAlta*
- experience of *International Offsets*
- additionality criteria -- a key issue
- opportunities

TransAlta's experience with CDM projects

- experience to date
- suggestions for facilitating an effective CDM program

TransAlta's experience to date....

Three projects:

- Dairy Development - "success"
- Line Loss Reduction - "withdraw"
- Fugitive Gas Reduction - "2 years later..."

Suggestions for facilitating CDM projects

- most CDM project support comes from the U.S. -- more support from Canada requested
- UNFCCC parties must resolve allocation questions among countries
- transaction costs high -- we need to facilitate market mechanisms as a priority
- action now must be credited to avoid widespread procrastination to Dec. 31, 2007

International Offsets' project development experience

- offsets are key to finding cost-effective solutions to exposures
- JI/CDM projects can provide substantial offset quantities
- JI/CDM can provide multiple benefits to the host country

Multiple Benefits...

- technology transfer in waste management, energy efficiency, fuel substitution, transportation, agriculture, forest management
- additional environmental benefits to regional air and water qualities
- associated with the above, improved community health

Learnings...

- timing from concept to registration may be lengthy (2 years is not unusual)
- transaction costs can be substantial
- educating the clients is often necessary, e.g. the legal department
- offset ownership and transferability is vital
- measurement and verification are essential

Opportunities...

Strategic....

- move now and seek the low-hanging fruit
- help define the game and shape the rules
- look outside the box, "rose coloured glasses" help see new potentials

Opportunities...

Technical...

- ⇨ waste management
- ⇨ tidal/run-of-river/micro hydro
- ⇨ bio-fuels
- ⇨ engine efficiency improvers
- ⇨ recycling
- ⇨ soils & forest management

Summary

- JI/CDM are key components of a cost-effective solution
- the time to move is now - seek out the opportunities, look outside the box
- additionality is key - we all have a stake
- JI/CDM can and should play a substantial role in achieving real, net reductions of GHGs to the atmosphere

CDM &
Sustainable Development

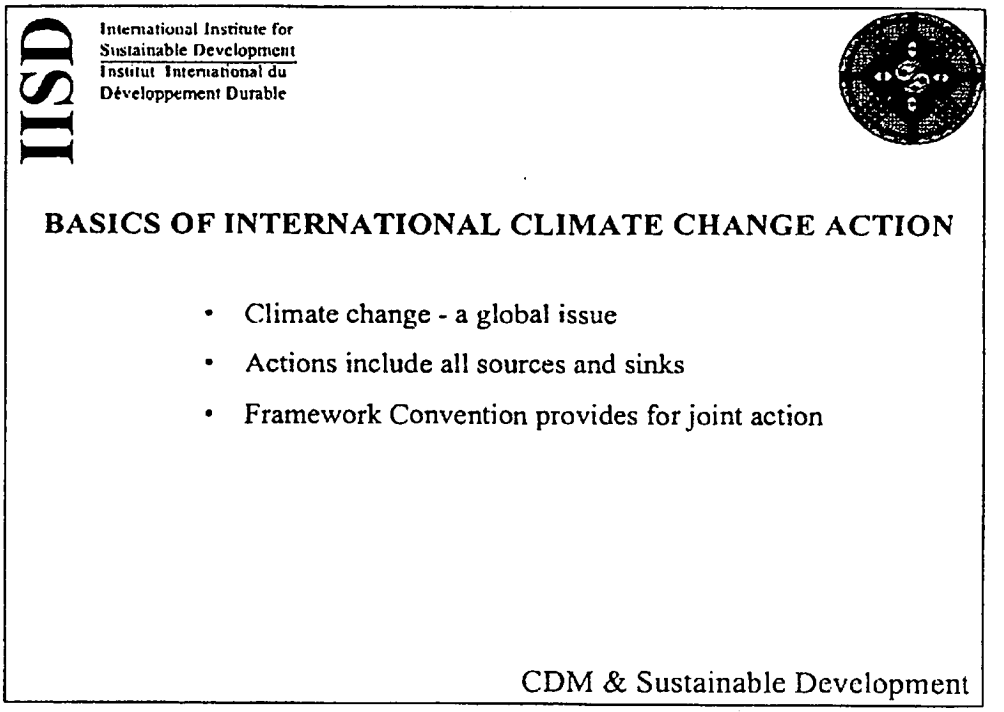
Presented by

Jim Leslie
Program Director of
Solutions for Business
International Institute for Sustainable Development

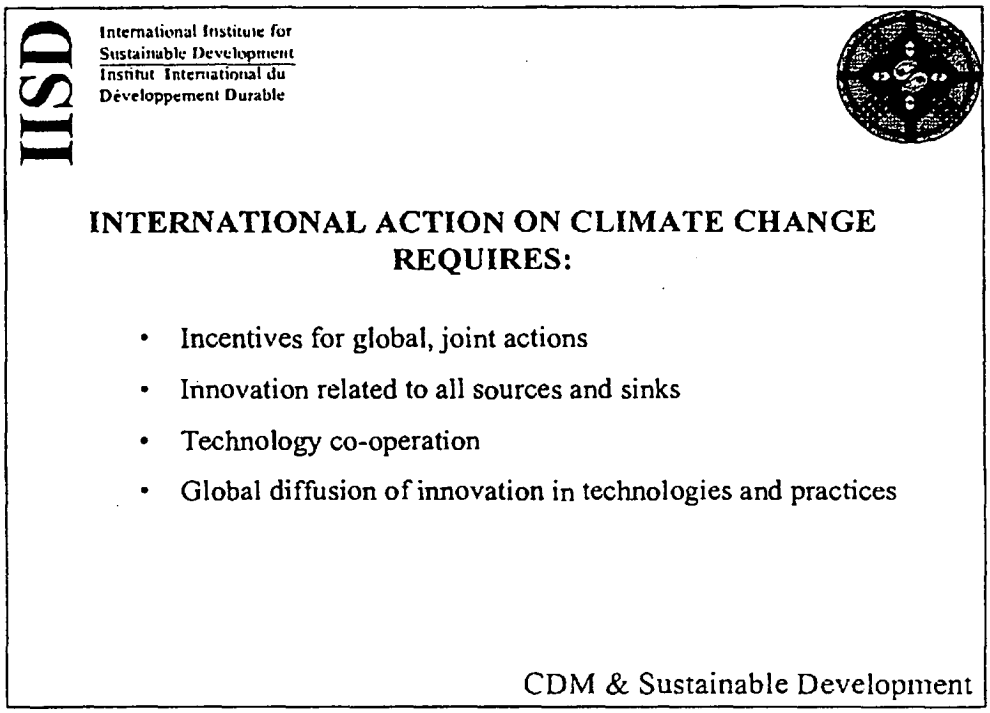
Presented at the

Clean Development Mechanism
Workshop

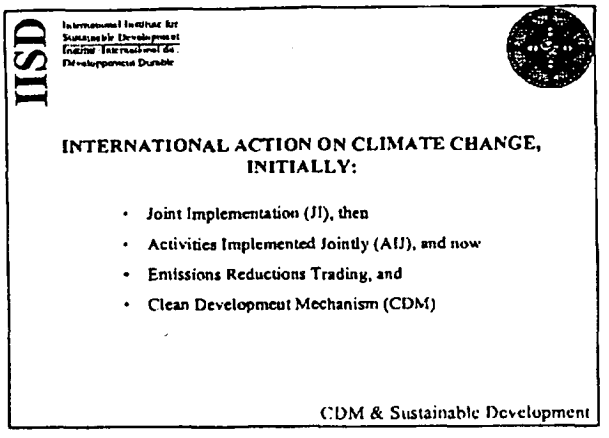
July 13-14, 1998



- Pleased to be with you to review CDM and sustainable development.
- I have had a ten year involvement in the potential of international action on climate change.
- As we know, international action on climate change action stems from the global nature of the issue, the need to include all sources and sinks and, flowing from the global approach, the importance of joint action.
- These basics are supported by both the science of the issue and by the economics of climate change action.
- They recognize two fundamentals:
    - •that action anywhere on the Earth is equally effective
    - •the importance of encouraging creative, innovative actions that are pursued cooperatively



- What are the pre-requisites for international action on climate change?
- First there needs to be some reward for taking actions that provide a credible and creditable contribution to climate change response.
- Of course in order to deal with climate change we need to adapt and the most important driver of adaptation is innovation. Through innovation we will develop the improvements in technology that will provide the breakthroughs in efficiency, improvements and reduced emissions.
- Innovation is of little global benefit unless we can achieve effective technology cooperation and through it the rapid global diffusion of innovation both in the technologies and in the operational practices and management systems through which the technologies are used.
- Requirement to more decision-making towards sustainability:
  - Example - India needs more electric energy
  - It could build a new coal-fired plant or
  - It could improve efficiency in existing plant or
  - Reduce line losses



- As you are all aware, the progress on international action on climate change has been disappointing and frustrating for anyone with a sense of its potential.
- First we had Joint Implementation, which of course still continues for Annex 1 countries.
- Then as a result of COP 1 at Berlin, we had the pilot phase established under the title "Activities Implemented Jointly".
- And now we have the Kyoto Protocol that includes provisions for trading and, the subject for our discussion today, the Clean Development Mechanism. Over the last five years in my work in TransAlta, and in efforts which I led in the Climate and Energy Working Group of the World Business Council for Sustainable Development, I have experienced a sense of frustration and failure in respect of efforts to develop and achieve the potential for international action.
- I sometimes think that if we had followed the kind of path that we have taken on international action on climate change with the development of computers, we would be all still feeding punched cards into main frame computers as I was doing in the mid-60's.
- Robert Falls has talked about the industry perspective so I will not dwell on my TransAlta experience. I will say this. The contribution that we saw that joint implementation could make to both TransAlta's climate change action planning and to development in such countries as India and in Latin America, could only be minor and exemplary because of the lack of policies and framework within which a joint implementation business arrangement could be effectively established. Equally, international action is only one element of a climate action plan.

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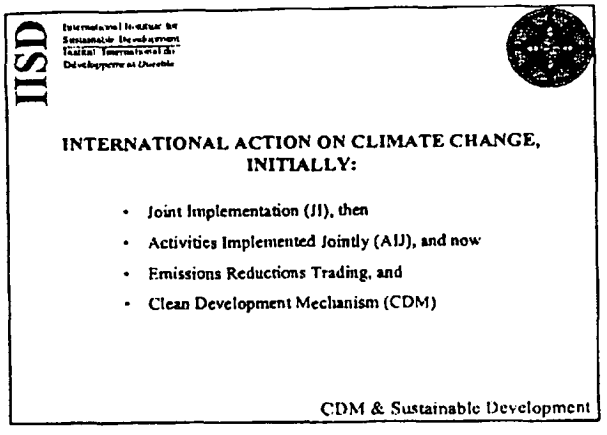


- Equally in my work through the World Business Council for Sustainable Development the absence of effective incentives:

  •credit and banking and

  •conditions - rules, framework, registry

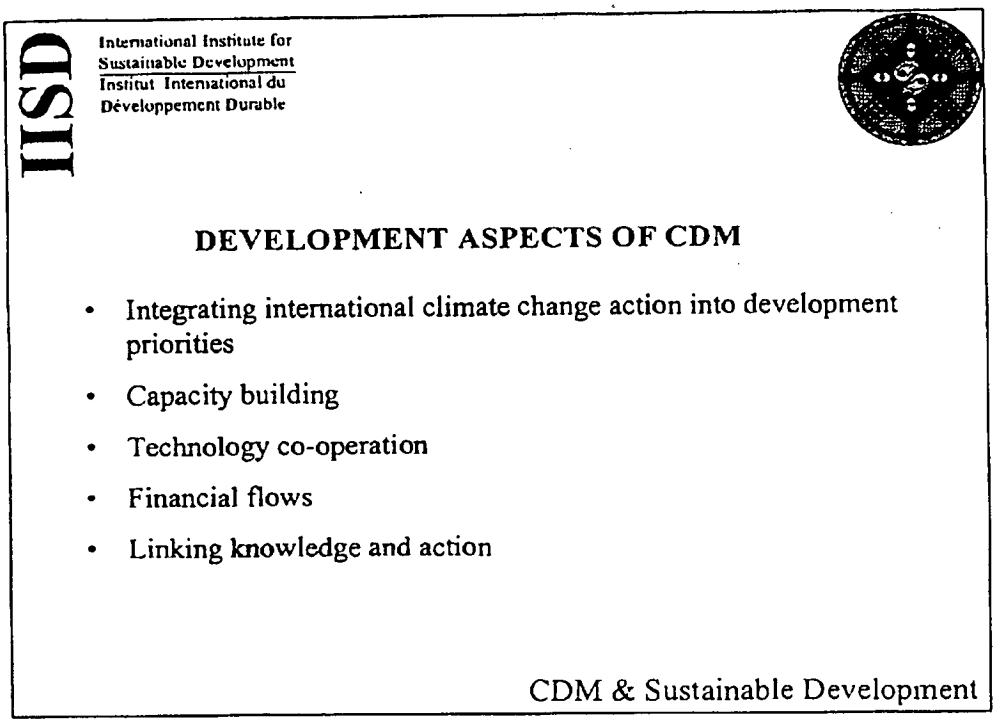
  for successfully piloting joint implementation opportunities was a deterrent to anything but the most limited actions.

- I was at COP 1 at Berlin reporting on the WBCSD's first project entitled "Catalyzing the Market for Joint Implementation projects. I represented the World Business Council, a group of leading global businesses concerned with sustainable development. However, it was interesting that my team of presenters at Berlin was a group of ENGO's who were excited about specific project opportunities in a number of countries and anxious to showcase these as indicative of the potential for action. The demand for JI at the grassroots level was from ENGO's. The barriers to JI were from some of the ENGO's in the north as well as from the international negotiation process that seemed determined to build barriers or to insist on a perfect system rather than to test promising opportunities and learn by doing. It was a clear example of the perfect being the enemy of the good.

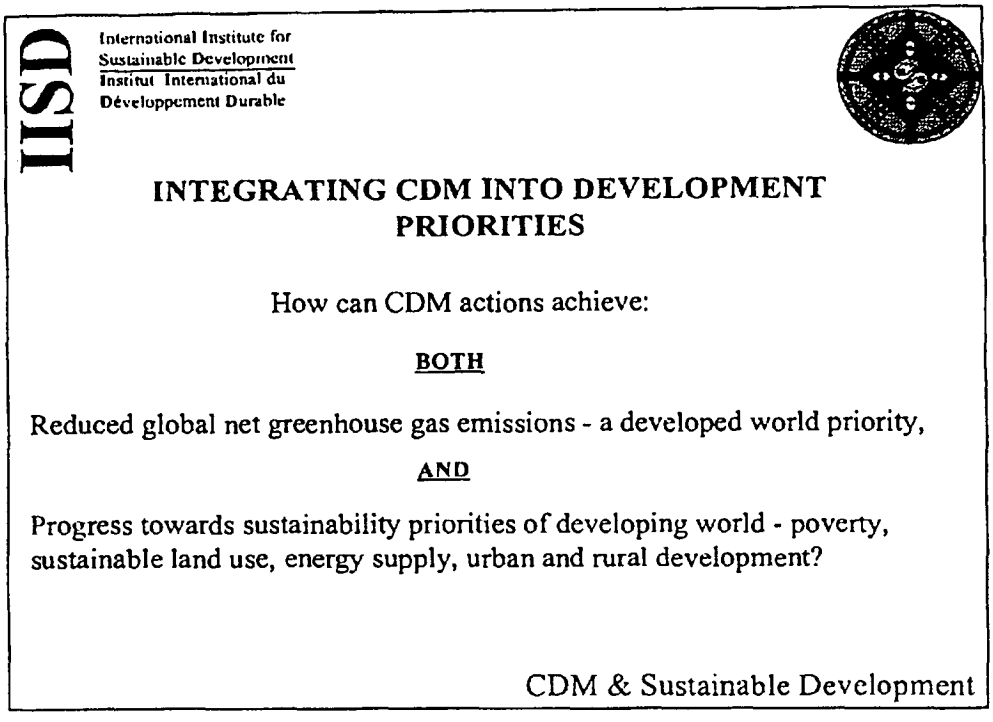
- Of course out of Berlin came "Activities Implemented Jointly" and a pilot phase for such action. It created a contradiction. A pilot phase with no incentives. Little wonder we have had very limited and only symbolic kinds of actions in the face of an immense potential for international climate change action.

- As I talk to you today about the development perspectives on CDM, my main message is that we need to learn from the frustrations and failures of the past and use the CDM opportunity to make its appropriate and important contribution and realize its potential to meeting our goals for global sustainable development and our climate change goals.

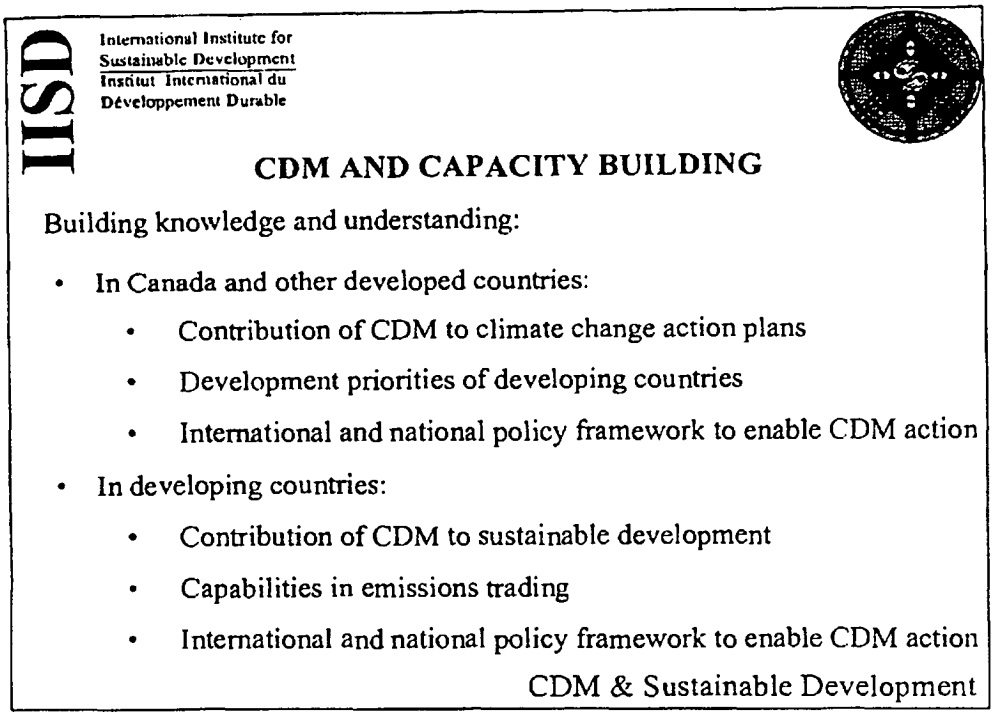
- How will we avoid repeating the failed efforts and lost time of the past? That is our challenge.



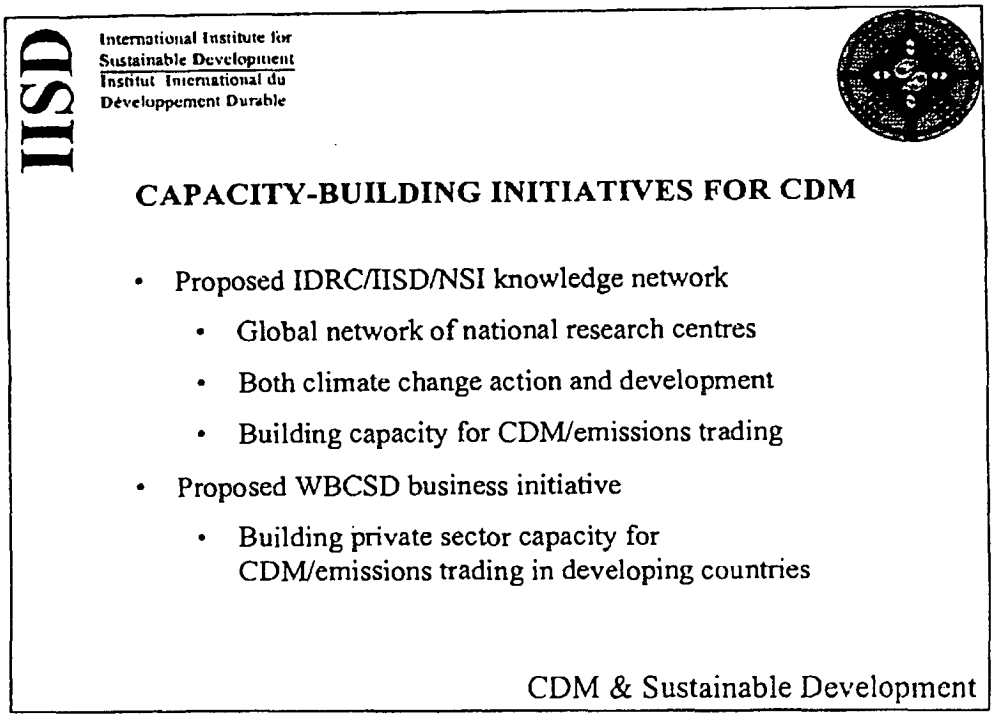
- What are the development aspects of CDM?
- I would like to talk about five aspects of development. First the essential requirement is that international climate change action must be integrated into the development priorities of the developing world.
- There is a need for capacity building to build knowledge and understanding as we will see. I referred earlier to technology cooperation as being the key to diffusion and application of technologies in both directions between north and south.
- CDM has an important potential contribution to make to the financial flows to the developing world.
- Finally I'll talk about the need to link knowledge and action again in both directions. We need to take and spread knowledge that we have and apply it into action. We also need to use the action that we take as the basis for the knowledge that we go forward with.
- I will talk about these from the perspective of the host, developing, country.



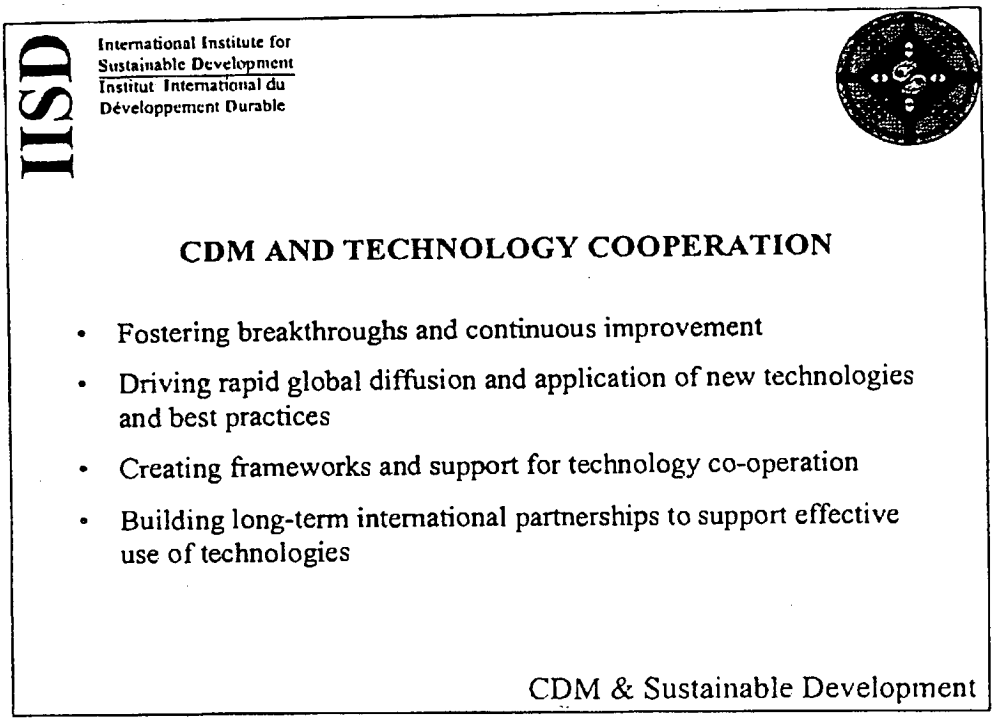
- I think this is the key question related to the development perspectives on CDM.
- In the past we have seen the push for international climate change action coming from the north and I was part of efforts to push for such actions to meet a part of the climate change action planning of business.
- However, we know that the response to pushing harder is often increasing resistance.
- Success with CDM will only result from a pull for international action from the developing world.
- When developing countries see the contribution that CDM can make to their own priorities for sustainable development then they will as a group - and not just as a few isolated countries like Costa Rica - only then will they start to drive for international action and will help create the framework for both effective piloting of the concept and the policy environment in which CDM can flourish.
- And, as this happens, we in Canada will get what we have been pushing for:
    - economic efficiency in emissions reduction
    - trade and technology cooperation
- A WIN/WIN proposition



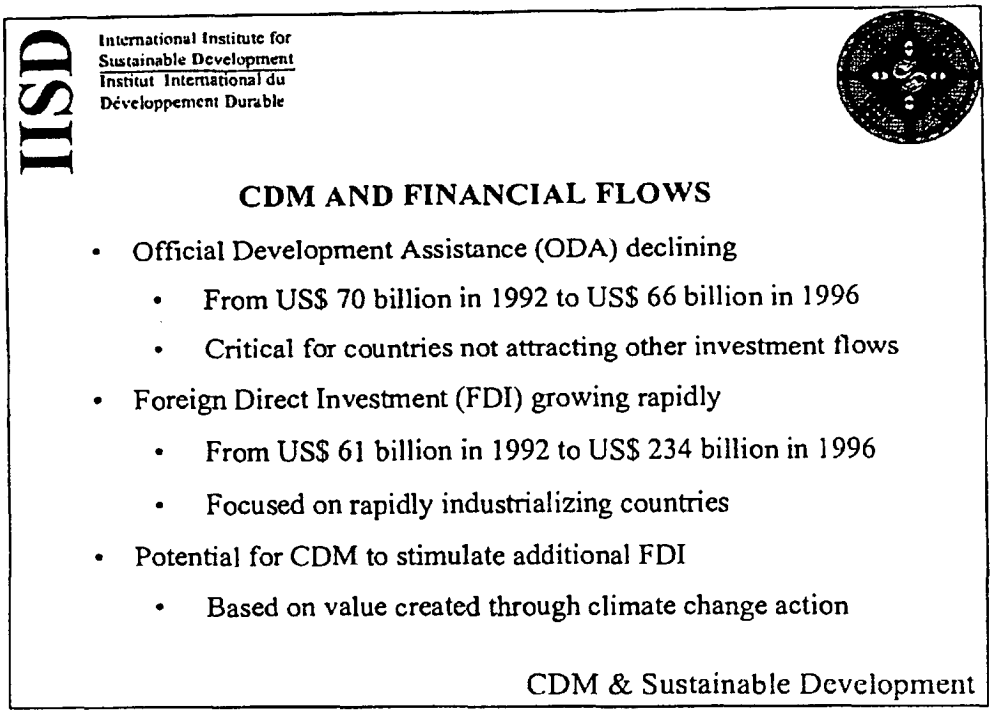
- There is a great deal of capacity building that is needed both in the developed world and in the developing world if CDM is to achieve its potential.
- At the moment international action on climate change is to be found only among a few countries, a few businesses and a few ENGO's.
- For CDM to become an important part of the climate change action plans, much greater knowledge and understanding of its potential is required among business in the developed world, equally there is need for a better understanding of the priorities of developing countries so that business actions can be more reflective of local needs and plans can better fit local priorities.
- In the developing world, there is a big gap to fill before policies and actions can support effective CDM activity.
- Of course, by building knowledge and understanding of CDM, there will be a more effective and better informed international negotiation process to clarify the rules and conditions of CDM.



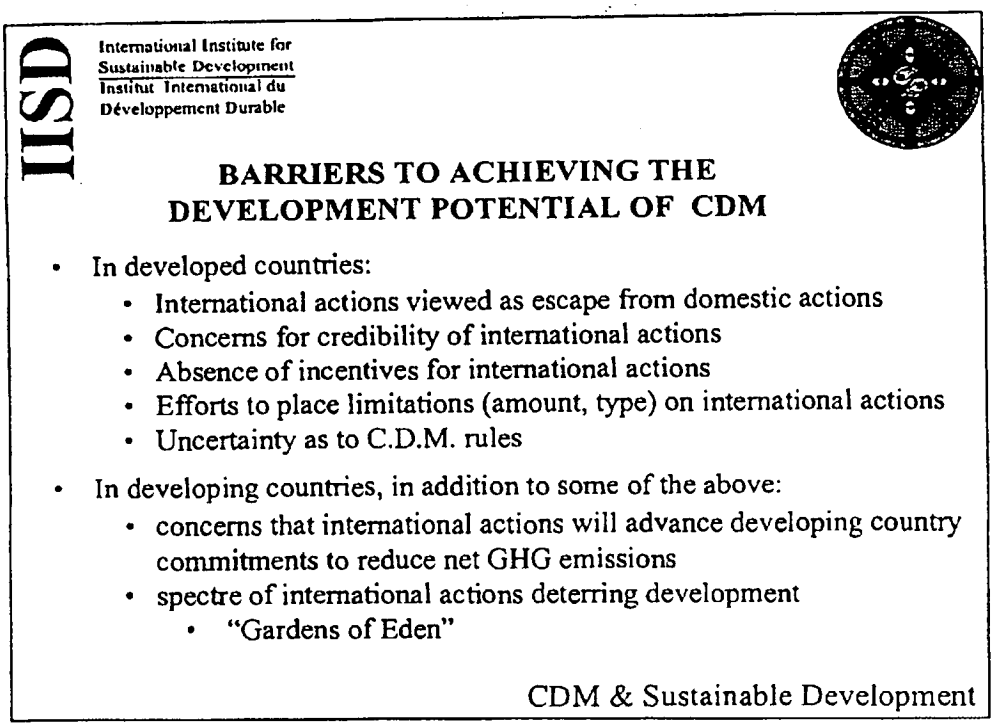
- Here I would like to talk about two potential initiatives to build capacity. First, the three Canadian institutions including my own IISD together with the International Development Research Centre and the North-South Institute have proposed the creation of a knowledge network linking knowledge centres in the developing and the developed world with a focus on building capacity for climate change action and development and fostering understanding and capabilities for using the provisions of the Kyoto Protocol to the advantage of all.
- Another prospective initiative is being pursued by the World Business Council through the WBCSD Foundation, which has, as its focus, education and learning. The focus of this initiative is to build private sector capacity for CDM and emissions trading in developing countries.
- Remember that while we put a lot of effort into assembling data and information, the real value-added is in knowledge that is the driver of action; and, of course, the value of pilot projects is that these are actions that are the generators of knowledge.



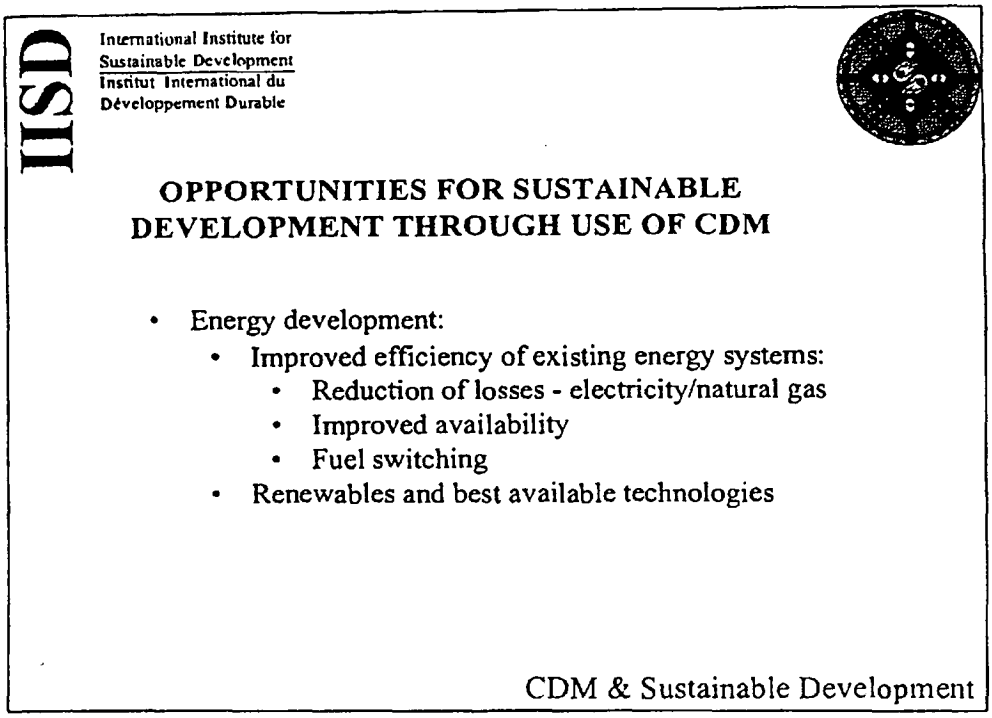
- It goes without saying that a key contributor to meeting the climate change challenge will be innovation and technology development. We have seen that climate change is already acting as a driver for important breakthroughs in technology including from the work of IOGEN in Ottawa to Ballard in Vancouver and the developments in gas turbines and cogeneration.
- So we need the breakthroughs in technologies and we need to at the same time have the improvements in operational practices that provide continuous improvement in operations.
- More than that we need to get rapid global diffusion and application of best technologies and best practices.
- It is in creating a context for supporting such diffusion and technology cooperation that CDM is one of its most important potentials and we need to ensure that we have incentives for achieving these desired end results. This need was equally present in the prior JI and AIJ environments but was lacking in the way it was institutionalized.
- And out of the building of technology cooperation frameworks will come the partnerships that will support effective use of technologies.



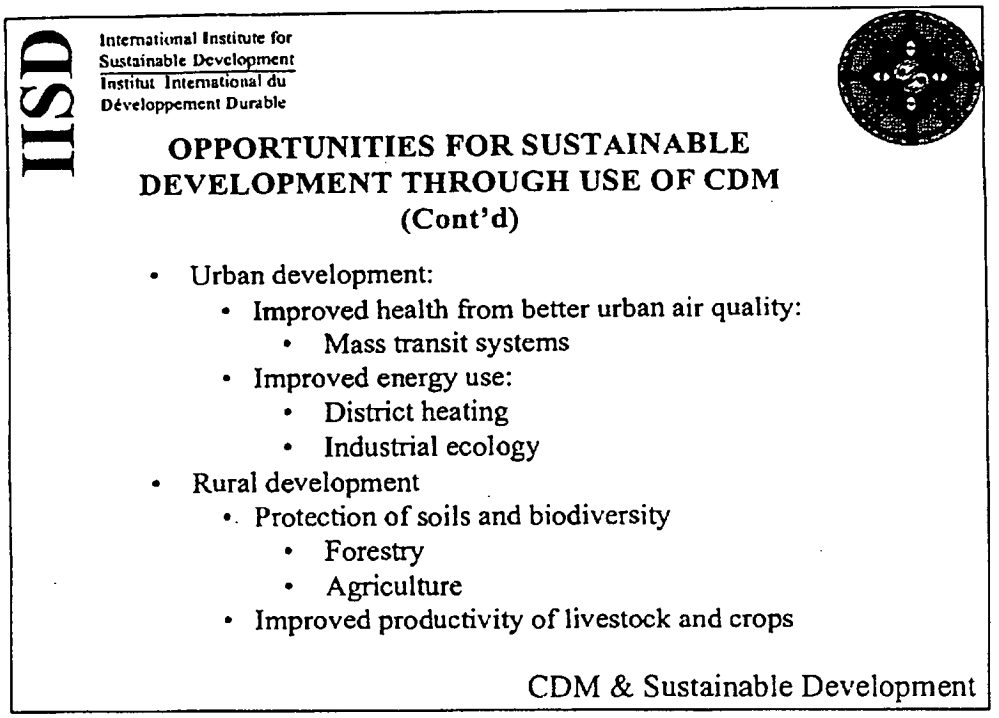
- We have seen the reductions in the traditional forms of development assistance as governments struggle with deficits and high levels of debt.
- At the same time there has been a rapid growth in foreign direct investment as globalization proceeds at pace.
- However, such foreign direct investments tends to be focused on a few countries and this means that the traditional development assistance is a critical factor for other countries that are not attracting such private sector investment flows.
- Many of the opportunities for climate change action are in countries which are not necessarily rapidly industrializing but which still have important opportunities for climate change action
- This is where I believe CDM can make an important contribution to create a new flow of private sector investment that will be drawn into many countries that may not be receiving such foreign direct investment at the moment.
- Such a flow of funding from the private sector is essential for achieving the results that are the goal and the promise of CDM; with the right incentives and conditions the private sector will act.



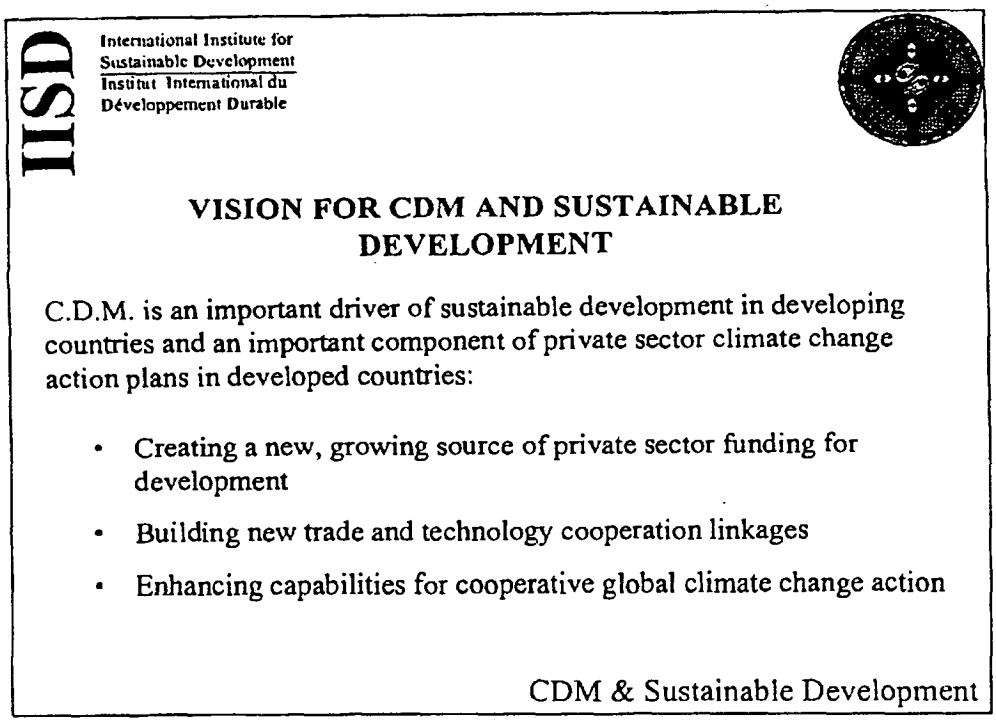
- What are the barriers to achieving the development potential of CDM?
- Well as we can see from my list there are many barriers and these are barriers that have applied to the earlier JI and AIJ versions of international action.
- Some of the barriers result from valid uncertainties and concerns that relate to the concept of CDM and to the negotiations relating to its rules and conditions.
- Other barriers result from the assumption that international action will be traded off against domestic action, this is of particular concern for those who see the need to drive changes in consumer behaviour in the developed world as the critical arena for action.
- Some of the barriers relate to the fears that have been generated by characterizing international action as a deterrent to development rather than a contributor to sustainable development.



- The work that has already been done on JI and AIJ have given us a glimpse of the opportunities for CDM to contribute to sustainable development.
- I have listed, under the heading of energy development, some of the examples of such opportunities.
- Some of these opportunities have already been mapped out by the pioneering efforts of particular countries, some individual businesses and a significant group of enthusiastic ENGO's.
- The critical requirement for exploiting the potential of CDM is to build on these pioneering efforts.
- The list of opportunities provided is by no means complete and others will emerge as we go forward.
- And its not just sharing technologies - its also operating/management practices



- This slide lists opportunities under the heading of urban and rural development.
- Infrastructure decisions are being made daily; they are opportunities that, if not taken, pass us by and we live with their consequences for decades.
- Too much is still traditional, established technologies.
- CDM - done to its potential - will influence/shift these daily decision.
- Equally, CDM has the potential to shift practices in land use - in forestry and agriculture - onto a more sustainable pathway.



- In conclusion, I offer my vision for CDM and sustainable development. It is a vision that those of us who have got excited about international action upwards of ten years ago have long carried with us.
- First, I see a world in which CDM is both a driver of sustainable development and a significant component of climate change action planning. It is important that CDM develops in such a way that it is integrated into sustainable development or will like its predecessors be an exotic, academic, discussion with only limited and symbolic actions.
- I see it as creating a new and growing source of private sector funding for development, some of it directed to places in the world where such development funding has been absent.
- I see it as building and creating new linkages in trade and technology cooperation for mutual benefit and contributing to the triple bottom line of economic, environmental and social progress.
- And finally CDM is enhancing capabilities for further cooperative global climate change action beyond what we can see at the moment through the innovations and adaptation that its activity generates.

AN ENGO PERSPECTIVE ON CDM

Robert Hornung, Pembina Institute

DFAIT CDM Workshop

July 14, 1998

Outline

- Technical Issues
  - baselines
  - additionality
  - promoting sustainable development
- Policy Issues
  - scope of CDM
  - limits to the use of CDM
- Incentives and Compliance

Technical Issues

- Key Tension
  - maximizing participation (minimize transaction costs and administrative burdens) vs. maximizing credibility and effectiveness
- Perfection may be the enemy of the good, but remember the VCR……..

Technical Issues: Baselines

- Essential to measure credit creation
- Many different possibilities:
  - project-based, entity-based, sector-based, national
- GERT illustrates how difficult this can be (allows presentation of 1-4 baselines)
- Hard to develop a single hard and fast rule

Technical Issues: Additionality

- Essential, but difficult to operationalize
- Some key 'types' of additionality
  - emissions additionality
  - regulatory additionality
  - investment additionality
  - technology additionality
  - business strategy additionality
- PIAD releasing a methodology soon

Technical Issues: Promoting Sustainable Development

- Free of local opposition
- Free of environmental burden shifting
- Provide multiple environmental benefits
- Provide hard and soft technology transfer
- Create local economic development activity
- Technological "leapfrogging"

Policy Issues: Scope

- Must only address sources and sinks covered by the Kyoto Protocol
- Must only address sources and sinks where there is a common definition and broadly accepted methodology
- Dealing with uncertainty….discounting?

Policy Issues: Limits

- There should be limits on the use of CDM
  - ensure that we take action at home (take advantage of efficiency improvements and new technologies)
  - ensure that funds to reduce emissions do not only flow out of the country but are also invested here
  - increase the probability of future adoption of commitments by developing countries

Incentives

- We may have a system ready to roll in 2000, but why should the private sector participate (e.g., AIJ, GERT, PERT)?
- What value does a credit have for a company not compelled to act by Kyoto?
- Clear link to domestic policy - credit for early action, but credit against what?
- What we do at home is the key…..

Clean Development Mechanism
Workshop

July 13-14, 1998

Hosted by
Department of Foreign Affairs & International Trade
125 Sussex Drive, Ottawa, Ontario

AGENDA

Monday, July 13, 1998

6:00 p.m. **Reception** (Tower A, 9th Floor, Lester B. Pearson Building)

7:00 p.m. **Dinner**
Keynote Speaker
Flexibility Mechanisms and Secretariat Viewpoint
Richard Kinley, Coordinator, Resources, Planning & Coordination, Climate Change Secretariat, Bonn

Tuesday, July 14, 1998

8:00 a.m. Continental Breakfast (Skelton Lobby)

Moderator: Peter Dickey, Principal, P.S. Dickey Consultants Inc.

8:30 a.m. **Welcoming Remarks** (Robertson Hall)
Paul Heinbecker, Assistant Deputy Minister, Global and Security Policy, Department of Foreign Affairs & International Trade (DFAIT)

8:40 a.m. **Opening Keynote Speaker**
Institutional Issues
Irving Mintzer, Senior Associate, Pacific Institute for Studies in Development, Environment & Security

9:00 a.m. ***Relationship Between Credits for Early Action and the CDM & Provincial Opportunities***
Don Macdonald, Senior Manager, Technical & Scientific Evaluation, Environmental Affairs Branch, Policy Division, Alberta Energy

9:20 a.m. **Question and Answer Session**

10:00 a.m. **Break**

Panel on Industry & NGO Perspectives

Moderator: *Peter Dickey*

10:20 a.m. ***Canadian Industry's Experience with AIJ and Emerging Opportunities in the Energy Sector for CDM***
Robert Falls, Principal, International Offsets

10:40 a.m. ***CDM & Sustainable Development***
Jim Leslie, Program Director of Solutions for Business, International Institute for Sustainable Development (IISD)

11:00 a.m. ***NGO Perspective***
Robert Hornung, Climate Change Program Director, Pembina Institute

11:20 a.m. **Question and Answer Session**

12:00 noon **Lunch**

12:45 p.m. **Introduction of Issues**
Jennifer Irish, Deputy Director, Environment Division, Department of Foreign Affairs and International Trade

1:00 p.m. **Roundtable discussions**
(***Facilitators:*** *Jim Leslie, Irving Mintzer, Peter Dickey)*

3:00 p.m. **Reports back from the Working Groups**
*(**Chair:** Jennifer Irish)*

3:30 p.m. **Workshop Wrap-up**
*(**Rapporteur:** Jim Leslie)*

DFAIT Clean Development Mechanism Workshop
July 13-14, 1998
Participants

Richard Ballhorn	Director, Environment DivisionDepartment of Foreign Affairs & International Trade
David Bazeley	Labrador Hydro Project
John Bennett	Director, Climate Change, Sierra Club of Canada
Martina Bosi	Economist. Environment Division, Natural Resources Canada
Anne Boucher	Environment Division, Energy Policy Branch, Natural Resources Canada
David W.K. Boulter	Director Economic & Statistics Services, Natural Resources Canada
Ellen Burack	Senior Policy Advisor, Climate Change Secretariat
Colette Cardinal	Exective Assistant, Global & Security Policy, Department of Foreign Affairs & International Trade
Vicky Christie	Consultant, Bronson Consulting Group
Michael Cloghesy	Directeur, Centre patronal de l'environment du Québec
Gerry Collins	Senior Energy Specialist, Natural Resources, CIDA
Jean Cooper	Acting Senior Director, Environment Division, Natural Resources Canada
Kelly Cooper	Global Change Strategies International Inc.
André Couture	Chargé du développement stratégique et du dossier des changements climatiques, Direction des politiques du secteur industriel, Ministère de l'Environnement et de la Faune
Melissa Dickey	Recorder, P.S. Dickey Consultants Inc.
Peter Dickey	Principal, P.S. Dickey Consultants Inc.
John Dillon	Senior Associate, Environment and Legal Counsel, Business Council on National Issues
Aldyen Donnelly	President, GEMCo
John Drexhage	Manager, Climate Change - International, Global Air Issues Branch, Environment Canada
Robert Falls	Principal, International Offsets
Philip Fleming	Senior Policy Advisor, Industry Canada
Lotte Flint-Petersen	Manager, Client Services, Power Supply Engineering, BC Hydro
Sushma Gera	Senior Economist & Policy Advisor, Foreign Affairs & International Trade
Donald Gilchrist	Economics Professor, University of Saskatchewan

DFAIT Clean Development Mechanism Workshop
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Participants

Thomas Gorman	Vice President, Finance, Cameco
Pierre Guimond	Senior Advisor, Government Relations, Canadian Electricity Association
W.J. (Bill) Hamlin	Resource Evaluation Engineer, Manitoba Hydro
Paul Heinbecker	ADM, Global and Security Policy, Department of Foreign Affairs & International Trade
Robert Hornung	Climate Change Program Director, Pembina Institute
Al Howatson	Senior Research Associate, Business and the Environment Research Program, Conference Board of Canada
Jennifer Irish	Deputy Director, Environment Division, Department of Foreign Affairs & International Trade
Colin Isaacs	President, Contemporary Information Analysis Ltd
Jack Jenkins	Consultant, TransCanada PipeLines Ltd
Anda Kalvins	Senior Advisor, Environmental Affairs, Ontario Hydro
Richard Kinley	Coordinator, Resources, Planning & Coordination, Climate Change Secretariat
John S. Klenavic	Consultant, Canadian Gas Association
Jim Leslie	Program Director of Solutions for Business, International Institute for Sustainable Development
Stewart Lindale	Government Policy Consultant, Canadian Portland Cement Association
Don Macdonald	Senior Manager, Technical and Scientific Evaluation, Alberta Energy
Stan Mason	Vice President, Atlantic Orient Canada
Kerry Max	Researcher, Development Cooperation, The North-South Institute
Leigh Mazany	Economist, Department of Finance
Jim McCuaig	Director, Environment & Natural Resources Division, Canadian International Development Agency (CIDA)
Chris McDermott	Policy Analyst, Climate Change International, Environment Canada
Scott McDougall	Regional Vice President & Area Manager, Jacques Whitford
Irving Mintzer	Senior Associate, Pacific Institute for Studies in Development, Environment & Security
Dominique Neuman	Groupe de recherche appliquée en macroécologie
Ron Nielsen	Director, Air Program, Pollution Probe

DFAIT Clean Development Mechanism Workshop
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Participants

Peter Padbury	Consultant, Policy Planning (CPP), Foreign Affairs & International Trade
Jeff Passmore	Passmore, Passmore Associates International
Chris Peirce	Vice President, Strategic Planning, Canadian Association of Petroleum Producers
Hugh Porteous	Director, Research & Corporate Relations, Alcan Aluminium
Amitav Rath	Director, Policy Research International Inc.
Wayne S. Richardson	Director, TEAM Operations Office, CANMET Energy Technology Branch, Natural Resources Canada
Douglas Russell	Partner, Global Change Strategies International Inc.
Satender Singh	Global & Security Policy, Department of Foreign Affairs & International Trade
Paul Thompson	Economic Regional Development Policy, Privy Council Office
Lucie Veilleux	Canadian Pulp and Paper Association
Nada Vrany	Environmental Affairs Branch, Industry Canada
Jim Wall	Director General, International Relations, Environment Canada
Richard Williams	Program Leader, Westcoast Energy Inc.

GLOSSARY OF TERMS RELATED TO COOPERATIVE IMPLEMENTATION MECHANISMS UNDER THE UN FCCC

(Preliminary Review Draft, July 1998)

1. **Activities Implemented Jointly (AIJ)**: Refers to projects undertaken during the Pilot Phase of Joint Implementation under the UN Framework Convention on Climate Change (FCCC). Such projects involve a company or government of a country listed in Annex 2 of the Convention working in cooperation with an enterprise or other entity in a developing country or a country with an economy in transition to the market system. AIJ projects earn no internationally fungible credits for emissions reductions or sink enhancement achieved during the Pilot Phase.

2. **Adequacy of Commitments:** An assessment of the sufficiency of commitments undertaken by Parties to the FCCC with regard to achieving the overall Objective of the Convention.

3. **Additionality**: An assessment of whether benefits achieved as a consequence of the UN FCCC would have occurred but for the efforts of Parties to implement the Convention. The term may refer to an increase in financing of environmentally beneficial activities. In this case, it refers *financial additionality*, i.e., an increase in financing for projects which reduce greenhouse gas (GHG) emissions below the level that would have been achieved as a result of traditional overseas development assistance (ODA) and the activities of the Global Environment Facility (GEF). Alternatively, the term may also be used to refer to an increase in the number of tons of emissions avoided or sequestered in biological sinks. In this second case, it refers to *environmental additionality*, i.e., physical quantities of emissions avoided or emissions sequestered beyond what would have resulted from unrestricted market trends or as a result of conventional development financing

4. **AIJ Pilot Phase**: The period between the first Conference of the Parties to the UN FCCC (Berlin, Germany, April 1995) and the end of the decade (31 December 1999) during which Parties agree to implement joint projects to reduce GHG emissions but without receiving internationally fungible credits that can be applied toward future emissions reduction requirements in the period following the Pilot Phase.

5. **Annex 1 Experts' Group**: A group of technical experts from governments and academic institutions convened by the Organization for Economic Cooperation and Development (OECD) to analyze the potential benefits and risks of emissions trading.

6. **Annex 1 Party**: A country listed in Annex 1 of the UN FCCC. This annex contains the names of Parties to the Convention that have market-based, industrialized economies or have economies in transition to the market system.

7. **Annex 2 Party**: A country listed in Annex 2 of the UN FCCC. This annex contains the names of Parties to the Convention that have market-based, industrialized economies.

8. **Annex B Party**: A country listed in Annex B of the Kyoto Protocol. This annex contains the names of countries that have agreed to reduce their emissions below the level they achieved in 1990.

9. **Assigned Amount**: The agreed maximum level of emissions of six GHGs for those Parties to the Kyoto Protocol listed in the Protocol's Annex B. The agreed level represents the one fifth of the Party's cumulative emissions for the first five year commitment period, 2008-2012.

10. **Ad Hoc Group on the Berlin Mandate (AGBM)**: A consultative group comprised of all Parties to the UN FCCC. This group took on the mandate of continuing discussions from on implementation of the Convention in the period between COP-1 (Berlin, Germany, April 1995) and COP-3 (Kyoto, Japan, December 1997).

11. **Ad Hoc Group on Article 13 (AG-13)**: A consultative group comprised of all Parties to the UN FCCC. This group took on the mandate of discussing issues related to compliance by Parties with their commitments under the Convention and, subsequently, under the Kyoto Protocol.

12. **Alliance of Small Island States (AOSIS)**: A caucus of Parties to the Convention representing the governments of island states threatened with serious damage or complete destruction from the impacts of rapid climate change.

13. **Baseline**: A continuation of current, historical trends in emissions for a project or a country, unaffected by concerns about the impacts of rapid climate change to a GHG buildup.

14. **Berlin Mandate** (1995): Refers to the decision taken at COP-1 to continue discussions on implementation of the UN FCCC until COP-3 in December 1997. Also used to refer to the specific provision of the decision taken at COP-1 affirming that no additional commitments are required of developing countries.

15. **Bilateral Approach**: Refers to efforts by two Parties to agree on joint activities to reduce the risks of rapid climate change.

16. **Bureau of the Convention**: The officers of the COP and the Subsidiary Bodies elected by the Parties to the UN FCCC.

17. **Cap and Trade System**: A system of tradable emissions permits in which individual participants agree to limit their emissions of a set of identified pollutants. Participants in the system may reduce their effective emissions by curtailing their polluting activities, or through direct investment in lower-emissions technology, or by purchasing emissions permits or "offsets" from other participants in the system.

18. **Carbon dioxide (CO_2):** The most abundant and important greenhouse gas resulting from economically important human activities.

19. **Carbon-equivalent ton**: The quantity of any greenhouse gas with a heat-trapping potential equivalent to one ton of carbon in the form of CO_2.

20. **Certification**: The process of approving the eligibility of an activity or project to generate internationally fungible emissions reductions or offsets due to carbon sequestration by biological sinks. Such activities may be organized under the Clean Development Mechanism (CDM), as a Joint Implementation project, or through an international trade of emissions permits within the assigned amount of a Party to the Kyoto Protocol.

21. **Certified Emissions Reduction (CER)**: A recognized unit of emissions reduction or GHG uptake resulting from a CDM activity. May be measured in carbon-equivalent tons.

22. **Chlorofluorocarbons (CFCs)**: Ozone-depleting substances with significant Global Warming Potential whose manufacture and use is regulated under the Montreal Protocol on Substances that Deplete the Ozone Layer.

23. **Clean Development Fund**: One element of a proposal originally introduced by Brazil to fund environmentally-sound investment in developing countries. Payments into the fund would have been required of all Parties to the Convention that exceeded their agreed emissions limits.

24. **Clean Development Mechanism (CDM)**: One of the cooperative **implementation** mechanisms outlined in the Kyoto Protocol. (The cooperative implementation mechanisms are also referred to as "flexibility mechanisms".) The CDM provides a vehicle for investments in developing country Parties by Annex B Parties (and legal entities within those Parties). Credit for emissions reductions achieved through CDM activities is to be divided between the host and investing countries. Such credits are additive to the assigned amounts allocated to the Annex B Parties. A portion of the proceeds from CDM activities will be used to finance the administrative

expenses of operating the mechanism. An additional portion of the proceeds will be used to finance adaptation projects in developing countries. An Executive Board (whose composition and roles are not yet fully determined) will administer the CDM.

25. **Climate Change Secretariat**: The administrative body of the UN which has the responsibility for overseeing the implementation of the UN FCCC and supervising additional negotiations on the issue.

26. **Comprehensive approach**: Refers to proposals to regulate emissions of six or more greenhouse gases under the UN FCCC and Kyoto Protocol.

27. **Conference of the Parties (COP):** An annual meeting of delegations representing the countries that have signed and ratified the UN FCCC.

28. **Cooperative Implementation Mechanisms**: A set of vehicles which allow Parties listed in Annex B of the Kytoto Protocol to fulfill some of their obligations for emissions reductions outside their national borders. Sometimes referred to as "flexibility mechanisms", the Cooperative Implementation Mechanisms include international emissions trading, joint implementation, and the Clean Development Mechanism.

29. **Emissions Reduction Unit (ERU)**: A recognized unit of emissions reduction or GHG uptake resulting from a joint implementation activity. May be measured in carbon-equivalent tons.

30. **Entry-into-Force**: The date on which instruments of ratification or accession representing 55 Parties and 55% of 1990 emissions by Annex B Parties have been deposited with the Climate Change Secretariat.

31. **Environmental additionality**: See Additionality above.

32. **Evaluation**: The process of determining whether the initial emissions reduction or emissions sequestration claims of a CDM or JI activity have been achieved.

33. **Executive Board (of CDM)**: The principal administrative institution of the Clean Development Mechanism.

34. **Financial additionality**: See Additionality above.

35. **Flexibility mechanisms (also referred to as "flex mechs")**: See Cooperative Implementation Mechanisms above.

36. **Financial mechanism**: The institution designated to collect funds under the auspices of the Convention from Annex 1 Parties and distribute them

to developing country Parties in order to assist the developing country Parties in financing the costs of activities designed to reduce the risks of rapid climate change.

37. **GEF (Global Environment Facility)**: The institution designated as the interim financial mechanism of the Climate Convention. A cooperative undertaking engaging the World Bank, the UN Development Programme and the UN Environment Programme as implementing agencies.

38. **Global Warming Potential (GWP):** A measure of the heat-trapping capability of an atmospheric gas, indexed to the heat-trapping ability of carbon dioxide, CO_2 .

39. **Greenhouse Gas (GHG):** An atmospheric gas that is transparent to incoming solar radiation in the visible part of the electromagnetic spectrum, but absorbs and re-emits infrared radiation from the Earth's surface.

40. **Group of 77 and China (G77 and China, or G77):** A caucus of Parties to the Convention representing the governments of developing countries that have signed and ratified the UN FCCC. Despite its name, this caucus represents more than 130 countries.

41. **Hydrochlorofluorocarbons (HCFCs):** A family of chemical compounds developed as substitutes for conventional chlorofluorocarbons (CFCs). These compounds include CFCs in which a hydrogen atom replaces one or more chlorine molecules in the original CFC structure. HCFCs are preferable to CFCs in the context of stratospheric ozone depletion in that they have lower ozone depleting potential (ODP). Nonetheless, these compounds may have significant global warming potential (GWP).

42. **Hydrofluorocarbons (HFCs):** A family of chemical compounds developed as substitutes for conventional chlorofluorocarbons (CFCs). These compounds include CFCs in which a hydrogen atoms replaces the chlorine molecules in the original CFC structure. HFCs are preferable to CFCs in the context of stratospheric ozone depletion in that they have lower ozone depleting potential (ODP). Nonetheless, these compounds may have significant global warming potential (GWP).

43. **Intergovernmental Panel on Climate Change (IPCC)**: A consultative group of more than 2500 scientific and economic experts organized jointly by the UN Environment Programme and the World Meteorological Organization. The IPCC is organized into three Working Groups, loosely focusing on the science, impacts, and economic aspects of climate change. The IPCC is best known for its periodic assessments of the state of the science and economic research on the risks of rapid climate change. It also convenes groups of experts to prepare special reports and technical reports requested by the Parties to the UN FCCC.

44. **International Emissions Trading (IET or ET):** One of the three cooperative implementation mechanisms (sometimes referred to as flexibility mechanisms or flex mechs) outlined in the Kyoto Protocol. A system of internationally tradable emissions permits based on national inventories of sources and sinks for greenhouse gases. The quantity of permits issued to each Party that accepts a cap on future GHG emissions is equal to that Party's assigned amount. (See also Assigned amount; Cap and Trade System; and Cooperative Implementation Mechanisms above.)

45. **Inventory-based Mechanism**: A family of cooperative implementation mechanisms that allow Parties to collaborate in finding cost-effective processes for reducing GHG emissions. This family of mechanisms is based on exchanges between Parties in which one Party exchanges a portion of its assigned amount with another Party in consideration for some agreed benefit under the Kyoto Protocol. (See also Assigned amount; Cap and Trade System; and Cooperative Implementation Mechanisms above.)

46. **Joint Implementation (JI):** A system of international cooperation designed to finance and implement cost-effective projects to reduce GHG emissions. Originally proposed by Norway during the negotiations leading to the Earth Summit (Rio de Janeiro, Brazil, June 1992). JI was adopted as part of the UN FCCC and the Kyoto Protocol. As of 1997, it represents a mechanism for cooperation only between Parties listed in Annex B of the Kyoto Protocol. (See also Cooperative Implementation Mechanisms above.)

47. **JUSCANZ (pronounced "juice cans"):** A caucus of Parties to the Convention that represented the governments of certain industrialized countries that have signed and ratified the UN FCCC. The group included Japan, the United States, Canada, Australia, and New Zealand.

48. **Kyoto Protocol to the UN FCCC (Kyoto Protocol, 1997):** An agreement reached during the third Conference of the Parties to the UN Framework Convention on Climate Change (Kyoto, Japan, December 1997). The Kyoto Protocol includes an agreement by industrialized countries to reduce their annual aggregate emissions of six GHGs during the initial commitment period (i.e., 2008-2012) to a level that is, on average, equivalent to 5.2% below their respective emissions levels in1990. The Kyoto Protocol also contains provisions for three cooperative implementation mechanisms that can be utilized by Parties to the Convention and the Protocol.

49. **Meeting of the Parties (MOP)**: An annual conference of delegations representing the countries that have signed and ratified the Kyoto Protocol. The first meeting of the MOP will take place in the year following entry-into-force of the Kyoto Protocol.

50. **Monitoring**: The process of regular, periodic inspection of CDM or JI activities undertaken to ensure that promised emissions reductions or emissions sequestration activities are achieved in qualifying projects.

51. **Multilateral or Portfolio-based Approach**: A proposal that CDM activities be aggregated into one or more pools of projects and overseen by the Executive Board by the CDM. Under this proposal, the CDM Executive Board would raise funds from investors and distribute them to certified projects, minimizing risks to individual investors. (Contrast with Bilateral Approach above.)

52. **National Communication**: A formal periodic report required of all Parties to the Convention. This report is expected to contain an inventory of all sources and sinks for human emissions of GHGs within the territory of the reporting Party. It may also contain a summary of policies, programs, and measures implemented by the Party to reduce emissions or enhance GHG sinks.

53. **National Inventory of GHG Sources and Sinks** (Also referred to as "the inventory"): A tabular report of all human-induced emissions and all sink-enhancement processes that are due to human activity within the territory of a Party to the UN FCCC.

54. **Non-Annex 1 Party**: A country which has signed and ratified the UN FCCC but is not listed in Annex 1 of the Convention. Most often, this term refers to developing country Parties to the Convention.

55. **Party**: A country that has signed and ratified the UN FCCC or the Kyoto Protocol.

56. **Perfluorocarbons (PFCs):** A family of chemical compounds containing, carbon and fluorine that is regulated under the Kyoto Protocol. These compounds are often observed as effluents of metal foundries and metal fabrication facilities including aluminum refineries.

57. **Project-based Mechanism**: A family of cooperative implementation mechanisms that allow Parties or entities within Parties to collaborate in finding cost-effective processes for reducing GHG emissions. This family of mechanisms includes Joint Implementation and the Clean Development Mechanism. (See also Clean Development Mechanism; and Cooperative Implementation Mechanisms; Inventory-based Mechanism; and Joint Implementation above.)

58. **Ratification**: The legally binding process of accession by which a country becomes a Party to the UN FCCC and the Kyoto Protocol.

59. **Signing**: The process by which a government indicates the intention of a country to ratify or accede to the UN FCCC or the Kyoto Protocol.

60. **Sink**: In the context of the UN FCCC, this term refers to a biological reservoir for gaseous carbon emissions. Examples of sinks include trees, agricultural crops, and soil microorganisms.

61. **Source**: In the context of the UN FCCC, this term refers to a technology or other human activity that leads to the release of greenhouse gases into the atmosphere.

62. **Subsidiary Bodies to the Framework Convention**: A set of formal consultative organs designed to facilitate discussion of issues related to the implementation of the UN FCCC and the achievement of the Convention's overall Objective. All Parties to the Convention are invited to participate in the deliberations of the Subsidiary Bodies. As of 1998, the Convention's subsidiary bodies include the Subsidiary Body on Implementation and the Subsidiary Body on Scientific and Technological Advice.

63. **Subsidiary Body on Implementation (SBI)**: A subsidiary body of the UN FCCC designated to deal with, inter alia, financial and administrative issues associated with implementation of the Convention and the Protocol.

64. **Subsidiary Body on Scientific and Technological Advice (SBSTA)**: A subsidiary body of the UN FCCC designated to deal with, inter alia, technical issues associated with achievement of the Objective of the Convention and the goals of the Kyoto Protocol.

65. **Sulfur hexafluoride (SF_6):** SF_6 is a pollutant with an unusually long atmospheric lifetime and a very high Global Warming Potential. An industrial chemical, it is one of six substances specifically regulated under the Kyoto Protocol. (See also Global Warming Potential above.)

66. **Supplementarity**: A concept related to the fulfillment of national obligations for emissions reductions under the Kyoto Protocol through the Protocol's Cooperative Implementation Mechanisms and outside the borders of the reporting Party. The Protocol indicates that actions taken by Parties outside their borders should be "supplemental" to emissions reductions achieved domestically. As of July 1998, discussions continue on the acceptable size of the portion of a Party's commitment to emissions reductions that can be achieved outside its borders. Some Parties have argued that, for such reductions to be truly supplemental, each Party must fulfill at least half of its national commitment within its national borders. Other Parties have argued that if any portion of a Party's commitment is achieved domestically, the remainder (i.e., the part achieved through international cooperation) is necessarily supplemental.

67. **Umbrella Group**: A caucus of Parties to the Convention representing the governments of industrial countries that have signed and ratified the UN FCCC. A descendant of the JUSCANZ group, the Umbrella Group contains, inter alia, Japan, the United States, Canada, Australia, New Zealand, Russia and several of the former republics of the Soviet Union.

68. **UN Framework Convention on Climate Change (UN FCCC, 1992)**: This agreement was signed by 164 countries at the Earth Summit (UN Conference on Environment and Development, Rio de Janeiro, Brazil, June 1992) following two years of negotiations. The Objective of the UN FCCC is to achieve "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 timeframe 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."

69. **Verification**: The process of ascertaining that emissions reductions or sink enhancements outlined in proposals for JI projects or CDM activities have occurred as promised.

70. **Vienna Convention on Substances that Deplete the Ozone Layer (Vienna Convention, 1980)**: This framework agreement was designed to control the production and use of substances that deplete stratospheric ozone. It has been implemented under the terms of the Montreal Protocol and the London Amendments to the Vienna Convention. The Protocol specifically regulates the production and use of chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and Halons.

ANALYTICAL ASSESSMENT PAPER:
Critical Issues in Designing the Structure and Rules for the Clean Development Mechanism of the Kyoto Protocol on Climate Change

Final Report

Prepared for
The Department of Foreign Affairs and International Trade
Ottawa

Prepared by
Cathleen Kelly
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Abyd Karmali
ICF Kaiser Canada
Toronto

May 12, 1998

Summary

Article 12 of the Kyoto Protocol on Climate Change defines a clean development mechanism (CDM), which engages the cooperation of non-Annex I Parties. The CDM was created with the dual purpose of assisting non-Annex I countries in achieving sustainable development and allowing Annex I countries such as Canada to cooperatively undertake projects with non-Annex I countries to meet their emission limitation and reduction commitments. This paper explores critical issues that Canada will need to address in defining the structure and rules governing the CDM. The paper covers both broad conceptual questions, as well as more specific technical and institutional questions, and evaluate possible options for addressing these issues. The following is an at-a-glance summary of issues and options:

Issue #1: How Should the Administrative Framework of the CDM be Structured?

A. Design the Executive Board to Function as a Subsidiary Body
B. Design the Executive Board to Function as a Board of Directors

Issue #2: What Approach to Project Identification and Proposal Development Should be Implemented?

A. Assign International Organizations as Implementing Agencies
B. Draw from National and Regional Institutional Arrangements Established during the AIJ Pilot Phase
C. Allow Project Participants to Submit Project Proposals Directly to the CDM Project Review Body
D. Hybrid Approach

Issue #3: How should the CDM Facilitate the Transfer of CERs?

A. Establish a CDM Carbon Fund
B. Allowing Trading Through Bilateral/Multilateral Agreements
C. Allow Non-Annex I Entities to Trade CERs Generated by Projects without Annex I Participants
D. Hybrid Approach

Issue #4: Should there be Restrictions on the Types of Projects included in the CDM?

A. Include all Land-Use and Forestry Projects
B. Exclude Only Forest Preservation Projects
C. Exclude Land-Use and Forestry Projects

Issues #5: How Should Measuring/Monitoring Protocols and Verification/Certification Procedures be Designed?

A. Design Generic Project Guidelines
B. Design Project Type-Specific Guidelines

Issue #6: How Might The CDM Be Implemented To Ensure CERs Are Compatible With Emission Reduction Units Achieved Through Other Cooperative Implementation Measures Defined In The Kyoto Protocol?

A. Consolidate CDM and JI Under One Institutional Framework
B. Establish Consistent Measurement/Monitoring Protocols and Verification/ Certification Procedures for the CDM and JI.
C. Develop National Level Baselines to Measure CDM and JI Benefits

Issue #7: What Options Exist For Defining The Portion Of Project Proceeds That Will Be Contributed To The CDM Administrative Expense Fund And A Fund To Assist Developing Countries Impacted By The Adverse Effects Of Climate Change?

A. The CDM Could Charge Fixed Fees
B. The CDM Could Charge Variable Fees

Issue #8: How Could the CDM Provide Incentives for Private Sector Participation?

Issue #9: How Might The CDM Provide Incentives For Developing Countries To Engage In Climate Change Mitigation Activities?

A. Use the Share of Proceeds for Administrative Expenses and Assistance with Adverse Impacts as an Incentive Mechanism for Climate Change Mitigation
B. Establish a Fund to Help Developing Countries Defray Increases in the Marginal Cost of Mitigating GHGs that Could Occur through Hosting CDM Project
C. Limit the Amount of CERs that can be Used by Annex I Countries to Meet their Emission Reduction Targets
D. Establish a Capacity-Enhancing Fund

I. Introduction and Background

The Kyoto Protocol, the landmark outcome of the Third Conference of the Parties to the United Nations Framework Convention on Climate Change in December 1997, represents, if ratified, the first legally binding international agreement on greenhouse gas (GHG) emission reductions for specific developed countries (referred to as Annex I countries). The Kyoto Protocol calls for the development of three cooperative implementation mechanisms to supplement domestic policies and measures adopted by Annex I Parties and to assist these Parties in achieving their emission reduction commitments under Article 3. Joint implementation (JI) under Article 6 and emissions trading under Article 17, allow those Parties with quantified emission limitation and reduction commitments (outlined in Annex B to the Protocol) to participate in cooperative transactions to meet these commitments. Article 12 defines a clean development mechanism (CDM), which engages the cooperation of non-Annex I Parties.

The CDM was created with the dual purpose of assisting non-Annex I countries in achieving sustainable development and allowing Annex I countries such as Canada to cooperatively undertake projects with non-Annex I countries to meet their emission limitation and reduction commitments. Major goals of the CDM include creating a global market-oriented approach to limiting GHG emissions and encouraging developing country participation in climate change mitigation activities. The CDM will also assist developing country Parties that are vulnerable to the adverse effects of climate change in meeting the costs of climate change adaptation.

Although Article 12 of the Protocol outlines a few CDM features and administrative functions, Parties to the Convention deferred agreement on structuring the specific rules, procedures, and institutions that will govern the CDM to the first Meeting of the Parties to the Protocol (COP/MOP 1), or soon thereafter. Moreover, the language included in Article 12 differs from the original Clean Development Fund proposal articulated by the Government of Brazil and no published papers analyzing the structure and functions of the CDM were submitted prior to the Kyoto Conference.

This paper explores critical issues that Canada will need to address in defining the structure and rules governing the CDM. The paper covers both broad conceptual questions, as well as more specific technical and institutional questions, and evaluate possible options for addressing these issues.

Section II of the paper discusses how this paper fits within Canada's overarching strategic policy objectives regarding the CDM, and notes linkages to Canada's evolving policies on other flexibility instruments included in the Kyoto Protocol as well as other international and domestic priorities. Section III presents an analytical assessment of policy questions and response options relevant to nine key issues that are critical to the development of the rules and structure of the CDM.

II. Strategic Policy Objectives

From a strategic policy perspective, defining and implementing a transparent and efficient CDM institutional structure is critical to provide incentives for private sector participation, to ensure that CDM GHG emission reduction projects are cost-effective, and to encourage developing countries to undertake climate change mitigation activities.

Moreover, assuring that the CDM structure is developed and implemented in a timely fashion is strategically important, since emission reductions achieved through the CDM can be counted toward meeting national quantified emission limitation and reduction commitments starting in 2000.

Canada's strategic policies objectives relevant to the CDM include:

- The CDM should provide investors with some level of assurance that their investments will yield certified emission reductions (CERs.)
- The CDM should be attractive to the private sector. Transaction costs should be minimized and market-based projects would be allowed.
- The timing in setting up the CDM is important, since emission reductions achieved through the CDM can be counted started in 2000.
- The CDM should be attractive to developing countries; demonstrating that it is a tool for sustainable development
- The CDM should be regarded as distinct from AIJ and JI pilot projects.
- A clear distinction should be made between the GEF and the CDM.
- Effective compliance regimes without financial penalties or trade sanctions should be secured.
- CDM must demonstrate environmental effectiveness.
- Links in credit trade between CDM, JI, and ET should be established.

III. Analytical Assessment

As participants in the policy discussions leading up to the COP-4, Canada will need to address critical questions regarding the structure and rules governing the CDM. For the purpose of this analytical assessment paper, these questions have been organized into nine key issue areas, each of which is discussed below. Within each issue area, the paper identifies these critical questions along with their importance to Canada's evolving strategic policy objectives regarding the protocol's cooperative mechanisms. In addition, this section discusses various options for addressing each issue and provides a preliminary assessment of the advantages and disadvantages associated with these options.

Issue #1: How should the Administrative Framework of the CDM be Structured?

Issue: To minimize transaction costs and ensure that the CDM provides incentives for the participation of both Annex I and developing country participants, the administrative structure and processes of the CDM should be designed to guarantee project credibility without becoming overly bureaucratic. If the CDM is administered efficiently and effectively, it could provide substantial cost savings to Annex I investors in achieving their emission reduction targets and encourage developing countries to undertake sustainable development projects with climate change mitigation benefits.

The administrative and operational bodies named in Article 12 of the Protocol include the COP/MOP, an Executive Board, and operational entities. In defining the institutional framework of the CDM, Canada will need to explore questions regarding the roles and functions of these and other necessary bodies. For example, what should be the role and function of the Executive Board, and to what extent should it be involved in the project cycle? Who should serve as Executive Board members and how should they be selected?

What institutions in addition to those named in the Protocol may be necessary to operationalize the CDM, and how will the Executive Board interact with these institutions? How can Canada make use of existing institutions to implement CDM at the project level? Two options for addressing these questions, along with their potential benefits and costs are discussed below.

Options:

A. Design the Executive Board to Function as a Subsidiary Body. Subject to the direct authority and guidance of the COP/MOP, the Executive Board could be designed to perform a broad scope of management, administrative, and technical activities. Under this option, the CDM Executive Board would consist largely of technical experts appointed based on their technical qualifications, as well as executive staff appointed to perform the necessary management and administrative tasks. An analogy for the technical experts might be the GEF's Science and Technology Advisory Panel (STAP) or UNEP's Technical Assistance Committee under the Montreal Protocol.

The Executive Board would perform technical functions, such as establishing CDM project criteria and guidelines based on guidance from SBSTA and SBI, evaluating project proposals against these criteria and guidelines, and holding technical consultations with project developers when necessary.

Administrative functions would include managing the administrative expense and climate change adaptation funds and coordinating with the operational entities designated by the COP/MOP to certify project emission reductions. Based on the modalities and procedures defined at COP-4 of the UNFCCC and thereafter, the Executive Board would also oversee the day-to-day operations associated with the CDM project cycle, including soliciting project proposals, announcing approved projects, producing CDM informational materials, and ensuring adherence to project cycle timelines.

This option follows closely with the language in Protocol in that it would not require the establishment or involvement of governing bodies beyond those specified in Article 12. One advantage to this option is that it centralizes CDM management, administrative, and technical functions within one body, and would thus minimize the CDM bureaucracy and potentially maximize efficiency. However the centralization of such a broad scope of activities within one body such that it was both establishing guidelines and evaluating projects against them would result in an Executive Board that lacked transparency.

B. Design the Executive Board to Function as a Board of Directors. Under this option, the scope of work performed by the Executive Board would be limited to management tasks such as approving policy guidelines and levels of funding for specific activities. Technical and operational tasks would thus, be performed by an entity other than those specified in Article 12, for example, a Secretariat. An analogy for the Secretariat might be the Multilateral Fund Secretariat under the Montreal Protocol. The Executive Board members could represent a regionally diverse pool of Party delegates, some of which could serve on a rotational basis while others could hold permanent positions (e.g., some Annex I delegates). It would be in Canada's strategic interest to negotiate a permanent position. Based on the experience from the Executive Committee of the Multilateral Fund under the Montreal Protocol and the Executive Council of the Global Environment Facility, however, this would be difficult to achieve.

The tasks performed by the Executive Board would include overseeing the implementation of the modalities and procedures defined by the COP/MOP and management of the administrative expense and climate change adaptation funds. The Executive Board might function in a way similar to the Executive Committee of the Montreal Protocol Multilateral Fund, or the Executive Council of the GEF. In addition, the Executive Board would manage the activities of the Secretariat and grant final approval of projects based on consultations with Secretariat members.

The Secretariat, staffed by technical experts appointed by the Executive Board, would perform the day-to-day administrative tasks associated with the CDM project cycle, including soliciting project proposals, announcing approved projects, producing CDM informational materials, and ensuring adherence to project cycle timelines. The Secretariat would also perform technical functions, such as establishing CDM project criteria and guidelines based on guidance from the Executive Board, SBSTA and SBI, evaluating project proposals against these criteria and guidelines, and holding technical consultations with project developers when necessary.

Although this option would require creation of an entity beyond those specified in Article 12, the division of management, administrative, and technical functions among an Executive Board and a Secretariat would establish a more transparent and practical governing framework than that outlined in option A. The division of responsibilities between the Executive Board and the Secretariat would increase the transparency of the process by making the Secretariat publicly and privately accountable to the Board.

Issue #2: What approach to project Identification and Proposal Development should be implemented?

Issue: Providing an adequate infrastructure for project identification and proposal development will be essential to ensure that a high number of credible projects flow through the CDM pipeline, and to create a mechanism that will attract private sector and developing country participants. In addressing this issue, Canada will need to consider critical questions, such as: Should the CDM invite various international organizations to act as "implementing agencies" to assist in project identification and proposal development activities (e.g., similar to the Montreal Protocol Multilateral Fund and GEF arrangements, where the World Bank, UNDP, and UNEP are implementation agencies)? Or should project identification and proposal development assistance be provided by national or regional level program offices within/among Annex I countries, who would assist in coordinating activities with host country governments (e.g., similar to the AIJ pilot phase arrangement)? If separate bodies are created or appointed to assist with project identification and proposal development, how will they interact with other bodies within the CDM institutional framework? Various options to address these questions and a brief assessment of their advantages and disadvantages are discussed below.

Options:

A. Assign International Organizations as Implementing Agencies. Under this option, the CDM could enlist international organizations, with their established bureaucracies and institutional knowledge, to work with private and/or public sector entities during the project identification or proposal development processes. These

implementing agencies could function in a manner similar to those implementing agencies that support the Montreal Protocol Multilateral Fund and the GEF project cycles. Thus, project developers and host country governments would work with an implementing agency to identify viable GHG emission reduction projects. If project participants have already identified a project, they would then work with one of the agencies to develop the project proposal for submission to the CDM project review body (e.g., the Secretariat or Executive Board). Based on comments from this review body, the implementing agencies would work with project participants to revise proposals to ensure they are consistent with established CDM project criteria and guidelines.

Since established international organizations would serve as the implementing agencies, one advantage to this option is that it would reduce the need to create a new bureaucracy to support project identification and proposal development activities, and thus would reduce up-front administrative costs. Similarly, the institutional knowledge and lessons learned through the involvement of implementing agencies in the Multilateral Fund and GEF project cycles could be applied to the CDM to further reduce administration costs and maximize project cycle efficiency. Because project participants could select one of several implementing agencies for assistance, as allowed under the Multilateral Fund and the GEF, this option can also lead to competition among the implementing agencies which, at healthy levels, can help to ensure that a sufficient number of credible project are identified and developed. However, potential problems can occur if the process of revising proposals based on the CDM project review body's comments becomes onerous and overly bureaucratic, or if the project approval process is influenced by political relationships between the review body and the implementing agencies.

B. Draw from National and Regional Institutional Arrangements Established During the AIJ Pilot Phase. Under this option, national and/or regional institutions similar to those created during the AIJ pilot phase (e.g., Canada's office for Joint Implementation) could be designed to serve a variety of functions. For example, these institutions could work with project developers and host country governments to help identify viable GHG emission reduction projects, and/or to develop project proposals for submission to the CDM project review body (e.g., the Executive Board or a Secretariat). These institutions could work with project participants to revise proposals based on comments from the review body. Under a more decentralized structure, these national/regional institutions could be designed to perform project review functions, rather than having project review centralized under one international CDM entity (e.g., the Executive Board or a Secretariat). These national/regional CDM institutions would be required to review projects in a manner consistent with standards and guidelines established at the international level (e.g., in conjunction with the Executive Board and the UNFCCC Subsidiary Bodies).

Because this option would borrow heavily from the technical work, institution knowledge, and lessons learned of the AIJ pilot phase, it could help to reduce administration costs and maximize project cycle efficiency. However, for this same reason, it may be somewhat inconsistent with Canada's interest in making a clear distinction between the CDM and the AIJ pilot phase, and thus, it could be politically difficult to implement. Furthermore, imposing some level of standardization for identifying projects, developing proposals, and in particular, reviewing projects, across these national/regional CDM bodies would likely be extremely difficult, and could lead to

the acceptance of projects that vary significantly in terms of the credibility of their GHG benefits. This option would provide Canada with the opportunity to provide direct input into the project development and review process as well as participate in the multilateral process designed to oversee the CDM.

C. Allow Project Participants to Submit Project Proposals Directly to the CDM Project Review Body. Rather than create an institutional layer not specifically called for in Article 12 of the Protocol, the CDM could be operationalized so that project participants receive necessary guidance directly from the Executive Board or some intermediary body, if created (e.g., a Secretariat). Under this option, project participants would receive only the minimal support required to identify the appropriate contacts within host country governments and to understand the project criteria and guidelines, rather than more substantive project identification and proposal development support.

An advantage to this option is that project development would require less coordination with an international bureaucracy, which could make the CDM appear more attractive to private sector participants. Under this option, however, it would be difficult to enforce standardization of project proposals, thus making the project review process more difficult and less transparent. In addition, given the complex legal arrangements and necessary coordination among project participants, host country governments, and the CDM approval body, it may be extremely costly for participants to develop projects without some institutional support.

D. Hybrid Approach. Options A and B may be implemented in complementary fashion. A precedent for this is the Multilateral Fund under the Montreal Protocol where countries contributing funds are permitted to withhold 20% of their contribution for use in projects and other activities managed by their bilateral agencies. Canada's bilateral activities are managed by the Technology Transfer Office within Environment Canada.

Issue #3: How should the CDM Facilitate The Transfer of CERs?

Issue: The language in Article 12 leaves room for the consideration of several options to facilitate the transfer of CERs to Annex I countries while encouraging non-Annex I countries to participate in cost-effective sustainable development projects. For example, Article 12 paragraph 6 indicates that the CDM, "..shall assist in arranging funding of certified project activities as necessary." Paragraph 9 indicates that "..acquisition of certified emission reductions, may involve private and/or public entities, and is subject to whatever guidance may be provided by the executive board." Based on this language, Canada will need to address questions such as: Could the CDM assist in arranging funding of certified projects and the transfer of CERs through the establishment and management of a carbon fund? Could bilateral agreements between host countries and private and/or public sector project developers serve as the principle mechanism to transfer CERs? Could the CDM provide a means for non-Annex I countries to develop projects without the immediate participation of Annex I country participants and to sell the CERs generated through such projects to Annex I countries? Should the transfer mechanism for CERs be different from those to be established for credit obtained through JI? Several options for addressing these questions, along with their potential advantages and disadvantages are discussed below.

Options:

A. Establish a CDM Carbon Fund. The COP/MOP could establish a CDM carbon fund to facilitate investments in certified CDM projects. The CDM carbon fund would act as a market intermediary by establishing a network of private and public investors in Annex I countries to fund CDM projects in non-Annex I countries. An analogy for this fund is the World bank's Prototype Carbon Fund. Under this option, the CDM carbon fund would provide an efficient mechanism for buyers and sellers to exchange CERs. The CERs generated through CDM carbon fund investments could be used by Annex I investors to assist in meeting their emission reduction requirements. The CDM carbon fund would consist of a well-diversified portfolio of emission reduction projects arranged via standardized deal-making. Under such an arrangement, a carbon fund manager could be appointed to develop strategies to mitigate project portfolio risks. The project fund manager could be a CDM Secretariat member, if such an entity is created. Alternatively, the carbon fund could be housed within one of the implementing agencies, which would serve as the fund trustee, if such agencies are included within the CDM structure.

The advantage of a carbon fund is that it could reduce investors' transaction costs and exposure to project-specific risks through portfolio diversification. Although transaction costs associated with such a fund are likely to be lower than those with direct project investments, carbon fund management costs will not be negligible. Given the risks associated with developing GHG emission reduction projects in developing countries (e.g., political instability, uncertainties in investment climate, lack of necessary institutional infrastructure, etc.) devising an effective investment strategy for a portfolio of such projects will be difficult. Since the investors' confidence in such a fund will depend on the credibility of the fund manager, it will be extremely important to select a candidate who has a somewhat high profile and is well-qualified. Costs associated with investment strategy development and fund manager compensation will increase transaction fees. In addition, exchange rate risks could further increase these costs unless appropriate strategies are employed to hedge CERs against currency fluctuations through options markets.

B. Allowing Trading Through Bilateral/Multilateral Agreements. This option would allow private and/or public sector entities interested in obtaining CERs to directly participate in project decision-making and development activities. These activities include: finding project partners, proposal preparation, GHG estimations, contract negotiation, host country approval, monitoring, etc. Alternatively, project investors could work through a broker, who could identify viable projects and perform any number of the required project activities on the investor's behalf.

Depending on the number of project participants, project agreements could be bilateral or multilateral in nature. Such agreements would reflect a process of project negotiation and development similar that supported by many national AIJ programs under the AIJ pilot phase. One advantage to this option is that the lessons learned during the AIJ pilot phase could be easily applied to the CDM project development process. However, given the wide range of somewhat complex and time-consuming activities involved in developing a CDM project, the transaction costs associated with direct participation in project development may be prohibitively high. Thus, some investors may want to obtain CERs without getting involved in project decision-making and development activities.

C. Allow Non-Annex I Entities to Trade CERs Generated by Projects without Annex I Participants. Another option (that could be seen as complementary to Option B) that might facilitate the transfer of CERs is to allow non-Annex I entities to develop emission reduction projects without Annex I country partners. The CDM Executive Board would be responsible for providing guidelines for eligibility and potentially for reviewing the application for CERs. The CERs generated through such projects could then be sold by non-Annex I countries to public or private entities in Annex I countries. The Costa Rican model of Certified Tradable Offsets is an example of this approach.

D. Hybrid Approach. By allowing the transfer of CERs to occur through a combination of the three options discussed above, CDM participants will have maximum flexibility in obtaining CERs. This option could make the CDM both accessible and attractive to the wide range of buyers and sellers, and thus increase the overall number of entities participating in CER transfers. For example, some investors may not want to directly participate in project development activities, and thus would find a carbon fund the most desirable means to acquire CERs. Others may want to maintain a greater level of control over their investments, or play a more active role in the project development process, and thus, may want to engage in bilateral agreements or direct trades with non-Annex I sellers. However, it may be difficult to manage multiple CER transfer mechanisms, and thus this option could increase overall CDM administrative costs.

Issue 4: Should there be Restrictions on the types of Projects Included in the CDM?

Issue: Paragraph 3 of Article 3 states that the only land-use change and forestry activities that can be used to meet Annex I emission reduction commitments are "afforestation, reforestation, and deforestation". It is not clear if this paragraph governs Article 12. If it does, forest preservation projects would be excluded from the CDM. Given this ambiguity, as well as the contentious debate at Kyoto on the treatment of sinks in the Protocol, and the provision for further analysis of the sink issue, it would be prudent to consider whether certain types of projects *should* be excluded from the CDM. In evaluating this issue, Canada will need to explore a number of questions. For example, are certain types of projects more risky than others? Are the GHG benefits of certain types of projects more difficult to measure than others? Do some types of projects have inherently more uncertain baselines than others? Are some project types less cost effective than others? Three options to address these questions, and a brief assessment of their advantages and disadvantages, are discussed below.

Options:

A. Include All Land-Use Change and Forestry Projects. Article 12 is silent on whether eligible projects include enhancing or removal of sinks. Several points argue for the inclusion of land-use change and forestry projects in the CDM: 1) these projects are typically cost effective, so they are an attractive option for investors; 2) in addition to GHG reductions, these projects provide significant ancillary benefits for the host country, and therefore their inclusion may encourage developing country participation in the Protocol; 3) certain developing countries and NGOs already hold a strong interest in this class of projects, and it would be unfortunate to discourage their participation; 4) from an economics standpoint, it makes sense to include a wide range of options in the CDM, thereby increasing the flexibility and cost-effectiveness from potential investors; and 5) a

significant number of land-use change and forestry projects have already been implemented under the AIJ pilot program, and this on-the-ground experience can used as a foundation from which to build an even stronger program of GHG reduction projects in developing countries under the CDM. However, all of these arguments must be weighed against the aspects of these projects that make them risky GHG reduction investments: their GHG benefits *can* be lost, measurement of emission reductions is complex, and the development of credible baselines is difficult.

B. Exclude Only Forest Preservation Projects. An alternative to option A. would be to exclude forest preservation projects from the CDM, i.e., agree that paragraph 3 of Article 3 of the Protocol governs Article 12. Forest preservation projects have been considered risky not only due to the permanence problem that is common to all forestry projects (i.e., the fact that once carbon is sequestered or stored by these projects, it can be emitted due to unforeseen circumstances), but also due to difficulties associated with the development of credible baselines. Projecting deforestation rates with certainty, especially over long time frames, is difficult at best. This is due to numerous complex, interactive, and often poorly understood controlling factors, as well as unreliable or unavailable historical data. However, it is important to keep in mind that developing credible baselines for energy projects, as well as other forestry projects, is not straightforward either.

As with other types of forestry projects, forest preservation projects tend to be low cost and to produce significant, and attractive, ancillary benefits for the host country. Generation of ecotourism revenue is a particularly attractive, and unique, ancillary benefit of forest preservation projects. In addition, once a baseline is defined, the GHG benefits of forest preservation projects are relatively simple to measure (assuming the forest is mature and relatively uniform ecologically). For these reasons, there has already been a fair amount of interest and activity in this type of project on the part of NGOs and several developing countries through the AIJ pilot program. Also, forest preservation projects are uniquely relevant to the tropical developing countries because this group of countries that is currently experiencing the highest deforestation rates. Excluding this type of project might discourage certain developing countries from participating in CDM, and would eliminate a potential cost effective mechanism for reducing future global net GHG emissions. Conversely, including forestry projects would help promote and provide incentives for sustainable forestry management practices.

C. Exclude all Land-Use Change and Forestry Projects. Under the AIJ pilot phase, certain types of emission reduction projects have been considered to be more risky than others due to questionable permanence of the expected GHG benefits and to difficulties associated with accurate measurement of emission reductions. This is especially true for forestry projects. For example, the carbon sequestration benefits of afforestation and reforestation projects can be lost due to accident (e.g., forest fire) or inadequate protection against human intervention (e.g., illegal logging or clearing). Conversely, once an energy project achieves emission reductions, those reductions can never be lost (although these projects, as well as forestry projects, are subject to leakage).

The measurement of emission reductions, or measuring net annual GHG flux under both the baseline and the project scenario, is more difficult for projects that involve *area* sources or sinks (e.g., forestry and other land-use and land-use change projects) than for

those projects that involve *point* sources (e.g., construction of a wind facility rather than a fossil fuel fired power plant). Area sources and sinks typically involve several flux pathways, such as soil carbon accumulation, biomass growth, and decay of wood products, all of which vary in space and time due to factors such as rainfall, soil type, and land management techniques. Therefore, estimates of net annual flux for such projects are usually quite uncertain, and accurate measurement of flux once a project begins, while not difficult, is often labor intensive, and therefore, may be relatively expensive.

Point sources typically involve only one or two sources that are either easy to measure or can be derived from data that are regularly collected. For example, if a wind facility is built instead of a diesel fired power plant, the baseline emissions would be derived from annual diesel fuel consumption, the carbon content of the fuel, and the fuel combustion efficiency. Fuel consumption can be derived from the expected annual output of power, the presumed efficiency of the diesel plant, and the heat content of the fuel that would have been consumed. The carbon content of the fuel (on an energy basis) and the fuel combustion efficiency are standard factors that are not highly variable and that can be taken from readily available references. In this example, the source (by definition) is not spatially variable, and the only temporal variability in emissions that occurs is due to variable fuel consumption. Once the project begins, the fuel consumption that would have occurred in the absence of the project can be easily estimated from the power output of the wind facility.

For these reasons, some countries, NGOs, and other groups have argued that land-use change and forestry activities should be excluded from measures that may be used to meet national emission reduction commitments. However, forestry projects, especially in developing countries, are often low cost (on a per unit of GHG reduction basis), and have attractive ancillary benefits, including biodiversity conservation, watershed protection, and revenue generation through the production of wood and non-wood products. Therefore, forestry projects can present attractive opportunities for investment - both for the host country and the entity that invests in the carbon credits. Moreover, excluding all forestry projects from the CDM might discourage certain developing countries from participating in CDM, and would eliminate a potential cost effective mechanism for reducing future global net GHG emissions.

Issue #5: How should measuring/monitoring protocols and verification/ certification procedures be Designed?

Issue: Paragraph 5 of Article 12 states that CDM projects must achieve "real, measurable, and long-term benefits related to the mitigation of climate change" and emission reductions "that are additional to any that would occur in the absence of the certified project activity." These two sentences address the issues of accuracy of the measured GHG benefits, permanence of the achieved GHG benefits, and additionality of the GHG benefits. Answers to questions about these issues will determine how measuring/monitoring protocols and verification/certification procedures should be designed. In particular, what levels of certainty are necessary for credible GHG reduction measurements? How rigorous should baseline development be, and what level of effort should be made to ensure consistency across sectors or subsectors within each country or region? What measures must be taken to insure against reversal and/or leakage of GHG benefits? Two options for the design of measuring/monitoring protocols and

verification/certification procedures are outlined below in the context of possible answers to these questions.

Options:

A. Design Generic Guidelines. The measuring/monitoring protocols and verification/certification procedures could be designed as generic instructions, in the same way as measurement and verification guidelines for many national AIJ programs are designed. Such an approach would provide general guidance for all projects, rather than guidance that is specific to particular types of projects. This approach is consistent with two strategic policy objectives regarding the CDM: minimization of transaction costs, and encouragement of participation.

With only generic guidance, however, the CDM would run the risk of reduced transparency and accuracy of estimated GHG benefits, and therefore reduced certainty of results. Generic guidance would also likely result in inconsistencies among projects, an effect already observed in national AIJ program results. While generic measuring/monitoring protocols and verification/certification procedures may increase participation in the CDM, this increased participation may come at the expense of decreased real GHG benefits. A further disadvantage associated with generic guidelines is that it would be more difficult to grant certification and to obtain international credibility for CERs.

B. Design Project Type-Specific Guidelines. An alternative approach would be design measuring/monitoring protocols and verification/certification procedures that are specific to project types. This approach does not necessarily have to be more burdensome to the project developers than the generic approach, and might, in fact, result in easier implementation because the procedures would be more clearly defined. This approach would also likely increase the accuracy of estimated emission reductions, and therefore, the certainty of emission reductions.

The level of detail required by this approach would have to be carefully evaluated. For example, guidelines might be developed for renewable energy projects or might be disaggregated further by *type* of renewable energy project (i.e., wind, solar, biomass, geothermal, and hydro). Given the fact that biomass is about 50 percent carbon, an argument might be made that at least biomass energy projects should be treated separately from other renewable project types. Another consideration would be leakage and potential reversal of project benefits - i.e., are there aspects of these issues that argue for their treatment by project type, rather than generically? Certainly the issue of permanence discussed above under Issue #4 suggests that forestry projects are different from energy projects in this regard. Similarly, an argument could be made that project-specific, or economic sector specific, baselines should be developed for individual countries (e.g., a power sector baseline for Costa Rica). This would result in greater consistency across projects, but developing such baselines and ensuring that they are acceptable to the host countries would increase the administrative burden of the CDM considerably. Nevertheless, work on this topic, and other aspects of measuring/monitoring protocols and verification/certification procedures, through the AIJ

pilot program can provide useful guidance for determining the appropriate level of detail and desegregation for CDM.

Issue #6: How might the CDM be implemented to ensure CERs are compatible with emission reduction units achieved through other cooperative implementation measures defined in the Kyoto Protocol?

Issue: As discussed previously, the Kyoto Protocol calls for the development of three cooperative implementation mechanisms to supplement domestic policy and measures adopted by Annex I Parties and to assist these Parties in achieving their quantified emission limitation and reduction commitments. The carbon offsets resulting from these mechanisms are referred to in the Protocol using the following titles: (1) Emission reduction units (ERUs) achieved through projects implemented jointly in Annex 1 countries, (2) Certified emission reductions (CERs) generated through the CDM, and (3) ERUs achieved through Annex B trading.

To maximize the flexibility and cost-effectiveness of these mechanisms, they should be designed to function compatibly and their resulting carbon offsets should be equivalent (i.e., mutually tradable). In designing the CDM, policy makers will need to consider questions such as: Will CDM institutions be linked to the institutions of the other cooperative mechanisms defined in the Protocol? Can methodological linkages among the CDM and the other mechanisms be established? Options for integrating technical, procedural, and institutional functions of these mechanisms when these linkages are possible are discussed below. Because JI, like CDM, is a project-based mechanism whereas emissions trading is a broader program-based mechanism, the primary focus in this discussion is on the link between CDM and JI.

Options:

A. Consolidate the CDM and JI Under One Institutional Framework. Since the CDM and JI among Annex I countries are both project-based cooperative mechanisms, and thus will operate based on similar administrative and technical processes, these mechanisms could be managed and implemented by one institutional framework. That is, the institutional arrangements outlined under Issue #1 and 2 could be expanded to cover both the CDM and JI.

By combining the management and implementation of these mechanisms under one bureaucratic structure, overall administrative costs could be substantially reduced. However, such an arrangement could be perceived as reminiscent of AIJ, and thus inconsistent with Canada's interest in making a clear distinction between the CDM and the AIJ pilot phase. Furthermore, developing countries would likely oppose this merging of the institutional frameworks on the grounds that it blurs the difference between JI and CDM which were negotiated as separate instruments.

B. Establish Consistent Measurement/Monitoring Protocols and Verification/Certification Procedures for the CDM and JI. As discussed in Issue # 5, measuring/monitoring protocols and verification/certification procedures should be designed to ensure that project GHG benefits are real, measurable, and long-term. As project-based cooperative mechanisms, the CDM and JI will encounter similar issues when developing these protocols and procedures. Since emissions trading is an

inventory-based mechanism, its methods for measuring/monitoring and verification/certification will be distinct from those of the other two mechanisms. In particular, CDM and JI projects will always measure their benefits by comparison to *what would have happened in the absence of the project*, whereas emissions trading will be based on *what actually happened in a set of inventory years compared to emission commitments for that set of years*.

Given the similarities between the CDM and JI, one set of measuring/monitoring protocols and verification/certification procedures could be developed for both mechanisms. One way to do this, for example, would be to establish independent organizations accredited by COP/MOP. This would reduce the up-front administrative cost associated with establishing these protocols and procedures, while ensuring that CERs and ERUs generated through CDM and JI projects are both credible and comparable.

C. Develop National Level Baselines to Measure CDM and JI Project Benefits. Under this option, developing countries interested in hosting CDM or JI projects could be required to develop national baseline emission projections, with a breakdown of emissions by sector or subsector. These national baselines could then be used to estimate the GHG benefits of CDM and JI projects. Since developing credible national baselines requires significant technical and financial resources, developing countries would likely need technical assistance from CDM/JI institutions. Although the up-front costs associated with developing these baselines may be high, once in place, they would help to increase the comparability and credibility of CDM and JI project emission reduction estimates. Moreover, the existence of national level baselines would significantly reduce the data collection costs incurred by CDM and JI project developers. For example, under many national AIJ pilot programs, project developers have been required to supply a range of national, sector, and project-level data to develop a baseline emission projection that credibly demonstrates that the project GHG benefits claimed are real, measurable, and additional.

As expressed by many AIJ project developers, the costs associated with meeting these data requirements often exceed what they were willing or able to pay. With credible national baselines in place, project developers would not be required to develop their own baseline projections. Thus, national baselines could reduce transaction costs and risks associated with certified emissions reductions (CERs) and emissions reduction units (ERUs), making the CDM and JI more attractive to investors.

Issue #7: What Options exist for Defining the Portion of Project Proceeds that will be Contributed to the CDM administrative expense fund and a fund to assist developing countries impacted by the adverse effects of climate change?

Issue: As specified in Article 12 paragraph 8 of the Protocol, the COP/MOP, "shall ensure that a share of the proceeds from certified project activities is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation." Before these funds can be established, policy makers will need to determine what share of project proceeds will be contributed to these funds, and how this share will

be collected. Two basic options and several sub-options for addressing these issues are discussed below. The fundamental distinction between the two basic options is that the proceeds could be based on fixed fees or variable fees.

Response Options:

A. The CDM Could Charge Fixed Fees. Under this option, the CDM administrative expense and climate change adaptation funds could be financed through fixed fees charged to CDM investors. Alternatively, rather than require CDM investors to provide all resources to support these funds, Annex I country governments could be required to make a fixed fee contribution. One option for collecting fees from Annex I country governments would be to charge a fixed fee, based on the countries' standard share of contributions to the United Nations annual operating budget. Such a formula was used as the basis for determining the relative fees each country must contribute to the Multilateral Fund of the Montreal Protocol. An alternative possibility would be to base the allocation of fees on countries' share of 1990 GHG emissions and then to update the allocation formula on a yearly basis.

In general, the main advantage of requiring fixed fees is that Canada and other countries would have some certainty about the budget for the administrative fund and the fund to assist developing countries impacted by the adverse effects of climate change. In the case of contributions being based on the share of countries' GHG emissions, an incentive is built in for countries to reduce their contributions to CDM management expenses by reducing emissions. Developing countries would likely perceive such a system of contributions to be equitable.

B. The CDM Could Charge Variable Fees. The CDM could also cover the costs of managing the administrative expense fund and the fund to assist developing countries impacted by the adverse effects of climate change by using variable fees. Because there will be at least two different transactions involved in the CDM (i.e., generating CERs and allocating CERs) with different parties involved in each transaction, there are many opportunities for CDM to collect management fees. Variable fees could be determined up-front by charging the generators of CERs a transaction fee or at the back-end by charging those applying for CERs a transaction fee. For example, the World Bank's Prototype Carbon Fund charges a fixed up-front fee for participants.

A hybrid option of charging both front-end and back-end fees is also possible. An analogy for this is the management fees associated with mutual funds where fees can be either front or back-loaded. Another example is the administrative charge of 13% used by the Implementing Agencies (IA) to the Multilateral Fund of the Montreal Protocol. All projects proposed to the Fund have an additional 13% IA management charge, regardless of the scale of the project. Because there are usually economies of scale associated with managing larger projects, another variation on this option would be to have a sliding scale for fees based on the size of the project, either in terms of its GHG benefits of total costs.

Other options for collecting fees for the management expenses include charging a fee based on the total number of MMT of carbon equivalent emissions reduced or the number of CERs that are requested. In all cases where variable fees are used, there is less

certainty associated with the overall fees that will be generated to cover management and administrative expenses.

Issue #8: How Could the CDM Provide Incentives for Private Sector Participation?

Issue: For the private sector to participate meaningfully in the CDM, the mechanism will need to be designed and operated in such a way that the transaction costs of participation are low, risks associated with CDM projects are minimized, and the CERs providing through the CDM have international credibility.

Options: This issue cuts across several of the issues previously discussed and cannot easily be dissected into stand-alone options. In each of the issues discussed above, elements of options have been noted as ways in which the participation of the private sector might be enhanced. The discussion below is therefore organized around each of the key issues identified above.

With regards to the administrative framework of the CDM (discussed under Issue #1), it will be critical for Canada to ensure that the processes governing the CDM are not overly bureaucratic or onerous. The project cycle of identification, proposal preparation, presentation for approval, approval, and project implementation must be transparent. The GEF Secretariat, for example, has been trying to enhance private sector participation in the GEF. It has held consultations with the private sector and prepared a working paper but to this date, the GEF has seen little involvement from the private sector. The Multilateral Fund under the Montreal Protocol has focused primarily on ensuring that suppliers of technologies that reduce or eliminate ozone-depleting substances are well recognized and that information about their products is widely available through the central information clearinghouse. If the Executive Board is designed to function as a Subsidiary Body with technical experts appointed to serve, it may be desirable to select some of the experts from the private sector. Similarly, if the Executive Board functions more as a Board of Directors with a Secretariat responsible for management tasks, it may be important to have one member of the Secretariat be appointed from the private sector and to be responsible for liaison with industry.

The approach to project identification and proposal development (discussed under Issue #2) must ensure that incentives are in place for private sector entities to prepare and submit high quality project proposals. Regardless of the option selected (i.e., whether international organizations function as Implementation Agencies or whether the national and regional institutional arrangements established under the AIJ Pilot Phase are preserved) the guidance to private sector entities must be clear. At the same time, public agencies involved in catalyzing project identification and proposal development should not favor technologies. Rather one of their roles could be to provide objective information about technologies that will enhance awareness about them in developing countries. In addition, information about the non-GHG emissions reduction benefits of specific technologies must be made available (i.e., the ancillary environmental, social, and economic benefits associated with proposed projects.) In the AIJ pilot phase, this was one of the critical needs identified by developing countries.

Regardless of the option chosen, the CDM must transfers CERs (see Issue #3) in such a way that transaction costs are minimized and the integrity of the CERs is maintained. Project investors typically quantify the resources required for participating in mechanism

such as the CDM and thus the indirect costs imposed by the CDM must be kept to a minimum to ensure wider participation. If the Carbon Fund option is selected, the investor's confidence in the mechanism will depend upon the credibility of the fund manager chosen.

Issue #9: How might the CDM provide incentives for developing countries to engage in climate change mitigation activities?

Issue: Throughout the policy discussions leading up to the Kyoto Protocol, developing country governments and NGOs raised concerns about the equity and efficiency of AIJ, and the extent to which these activities will provide benefits to host countries in the form of new capital and technologies. In addition, many developing countries have demonstrated reservation when encouraged to consider committing to emission reduction targets, citing the UNFCCC recognition that developing country emissions must increase as they pursue essential national development programs. Although some developing countries have expressed their general support for AIJ, this support is often tied to the condition that developing countries' input and perspectives be seriously addressed when designing the mechanisms that will replace the AIJ pilot phase.

Since emissions from developing nations are rapidly increasing, developing country participation in the CDM could play a significant role in helping to achieve climate change mitigation goals. Thus Canada will need to consider options for designing the CDM to encourage developing country participation in climate change mitigation activities. Several options to do so are considered below.

Options:

A. Use the Share of Proceeds for Administrative Expenses and Assistance with Adverse Impacts as an Incentive Mechanism for Climate Change Mitigation. Under this option, the CDM could allocate the share of proceeds, which will be used to "cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the needs of adaptation," to developing countries based on their willingness to participate in climate change mitigation activities. For example, the CDM could offer such funds under the agreement that recipients host CDM projects or undertake other measures to reduce GHG emissions. The advantage to this option is that it would allow the CDM to encourage policies and measures that generate substantial emission reductions, but are not easily measured or verified and, thus, may not be captured through standard CDM projects or other cooperative mechanisms. For example, the CDM could offer funds to developing country governments in exchange for agreements that they undertake energy efficiency upgrades at their facilities, or implement polices to reduce emissions in the transportation sector. Since estimating the amount of emission reductions associated with these measures is highly uncertain, the amount of CDM credits generated by these actions would not be subject to the same rigorous quantification and verification criteria required of CDM projects.

The disadvantage of this option is that, like many non-regulatory programs such as voluntary programs or tax credits, it would be difficult to ensure that government activities are in addition to actions that would have been undertaken in the absence of the

distribution of the adaptation funds. In addition, this option does not ensure that the countries most vulnerable to the adverse effects of climate change would be the recipients of these funds. Furthermore, placing such conditions on the allocation of funds may be highly contentious, particularly from the perspective of developing countries vulnerable to the impacts of climate change.

B. Establish a Fund to Help Developing Countries Defray Increases in the Marginal Cost of Mitigating GHGs that Could Occur through Hosting CDM Project. Many developing countries have expressed concern that project-based flexibility measures, such as CDM, will lower national GHG emissions in developing countries and thus lower their national baselines. Increasing marginal costs of emission control associated with these lower baselines, may raise the cost of control if and when developing nations commit to future emission reduction targets. To address this concern, the COP/MOP could establish a fund to help developing countries defray any increase in the marginal cost of mitigating GHGs that may have occurred with the implementation of CDM projects. For example, a record-keeping system could be established to track investments made in each host country, and future mitigation efforts in host countries could be partially financed by contributions from Annex I countries that have benefited from the cost savings associated with the CDM. Although this option may be attractive to developing countries, it will require Annex I countries to commit additional resources to support this fund. If Annex I investors in CDM projects are required to contribute to this fund, it will decrease the cost-effectiveness of purchasing CERs and may reduce private sector participation in the CDM. In addition, calculating the increase in the marginal cost of GHG mitigation in developing countries that could result from CDM project implementation would be analytically difficult. Because it involves creating a separate fund, this option may not be attractive to Canada.

C. Limit the Amount of CERs that can be Used by Annex I Countries to Meet their Emission Reduction Targets. A common concern among developing countries is project-based cooperative mechanisms, such as the CDM, may cause the burden of GHG mitigation to be inequitably distributed between Annex I and non-Annex I countries. The fear is that the presence of CDM opportunities may lead Annex I nations to neglect domestic opportunities for emission reductions. To address this concern, the COP/MOP could limit the total amount of CERs that could be purchased from a developing country through the CDM to a pre-determined percentage (e.g., 10% or 25%) of either developing country emissions or an industrialized country's annual emission reduction requirement. Although a similar option was considered at the Kyoto Conference, it was not included in the Protocol. While this option may partially alleviate some concerns regarding GHG mitigation burden-sharing, it does not fully address the fact that the CDM projects that are implemented may lead to increases in the marginal cost of GHG mitigation in developing countries. Furthermore, it may not be in Canada's best strategic interest to propose a limit on the amount of CERs that it could use through the CDM.

D. Establish a Capacity Enhancing Fund. Developing country concerns regarding project-based flexibility mechanisms often are tied to the notion that monitoring, verifying, and enforcing emission reduction activities can be extremely difficult and costly. These difficulties stem from the significant scientific uncertainties that surround baseline and project scenario GHG estimation, particularly for projects in the forestry and agricultural sectors. If developing countries undertake CDM projects without Annex I

investors, they may not have adequate institutional capacity in place to monitor GHG emissions effectively, or to enforce commitments. Furthermore, developing nations may lack adequate institutional capacity needed to negotiate the terms of CDM projects and to ensure national renewable and non-renewable resources are used in a manner consistent with their development objectives.

To address these concerns, the COP/MOP could establish a fund for training and capacity building in developing countries. This fund (supported financially by Annex I countries) could provide methodologies, workshops, and training in monitoring and verification activities. As such, the activities would be additional to those currently financed through the GEF's climate change capacity-building projects. This fund could also provide resources to clearly define developing country national goals and priorities, build up research and management capacity, and identify technological and financing needs. These efforts would enable developing countries to direct CDM investments and technology transfer to areas generating developmental benefits.

Similar to option B above, this option may provide an incentive for developing country participation in the CDM and other GHG mitigation activities, but it will require additional contributions from Annex I countries and thus may not be attractive to Canada. If such a fund is supported by a share of CDM project revenues or fees collected from CDM participants, it will decrease the cost-effectiveness of CERs and may discourage private sector participation in the CDM.

ICF KAISER PAPER ON THE CDM IN TABLE FORMAT

Note: The tables were prepared for the 8th session of the subsidiary bodies, held in Bonn, June 1998.

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(May 28, 1998)

TABLE 1:HOW SHOULD BE THE ADMIMINSTRATIVE FRAMEWORK OF THE CDM BE STRUCTURED?

Activities	Memberships	Pros and Cons	Analogy
Option A: Executive Board as a Subsidiary Body subject to the direct authority and guidance of COP/MOP			

• Establishing project criteria and guidelines based on guidance from SBSTA and SBI,
• Evaluating project proposals against these criteria and guidelines,
• Holding technical consultations with project developers when necessary.
• Managing the administrative expense and climate change adaptation funds
• Coordinating with the operational entities designated by the COP/MOP to certify project emission reductions.
• Oversee the day-to-day operations associated with the CDM project cycle, including:
  ▪ soliciting project proposals,
  ▪ announcing approved projects,
  ▪ producing CDM informational materials,
  ▪ ensuring adherence to project cycle timelines.
	Technical experts appointed based on their technical qualifications
	
	Executive staff appointed to perform the necessary management and administrative tasks
		centralizes CDM management, administrative, and technical functions within one body, and would thus minimize the CDM bureaucracy and potentially maximize efficiency.
		
		However the centralization of such a broad scope of activities within one body would result in an EB that lacked transparency.
			GEF=s Science and Technology Advisory Panel (STAP)
			
			UNEP=s Technical Assistance Committee under the Montreal Protocol

Option B: Executive Board as a a Board of Directors with a Secretariat for the technical and operational tasks *(Interdepartmental preference)*			

Executive Board:
• oversee the implementation of the modalities and procedures defined by the COP/MOP
• management of the administrative expense and climate change adaptation funds.
• manage the activities of the Secretariat
• grant final approval of projects based on consultations with Secretariat members.
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CDM Secretariat:
• Perform the day-to-day administrative tasks associated with the CDM project cycle, including:
  ▪ soliciting project proposals,
  ▪ announcing approved projects,
  ▪ producing CDM informational materials, and
  ▪ ensuring adherence to project cycle timelines.
• Perform technical functions, such as:
  ▪ establishing CDM project criteria and guidelines based on guidance from the EB, SBSTA and SBI
  ▪ evaluating project proposals against these criteria and guidelines
• holding technical consultations with project developers when necessary.
	represent a regionally diverse pool of Party delegates, some of which could serve on a rotational basis while others could hold permanent positions
	
	**********
	Technical experts appointed by the EB
		require creation of an entity beyond those specified in Article 12 on CDM
		
		The division of management, administrative, and technical functions among an EB and a Secretariat would establish a transparent and practical governing framework.
		
		The division of responsibilities would increase the transparency of the process by making the Secretariat publicly and privately accountable to the EB.
			Executive Committee of the Multilateral Fund under the Montreal Protocol
			
			Executive Council of the Global Environment Facility
			
			**********
			Multilateral Fund Secretariat under the Montreal Protocol

TABLE 2:WHAT APPROACH TO PROJECT IDENTIFICATION AND PROPOSAL DEVELOPMENT SHOULD BE IMPLEMENTED?
To attract private sector and developing country participants and to ensure that a high number of credible projects flow through the CDM pipeline, it is essential to develop an adequate infrastructure for project identification and proposal development assistance

Description	Pros & Cons

Option A: Assign International Organizations as Implementing Agencies	
• Project developers and host country governments would work with an implementing agency to identify viable GHG emission reduction projects. • If project participants have already identified a project, they would then work with one of the agencies to develop the project proposal for submission to the CDM project review body (e.g., the Secretariat or EB). • Based on comments from this review body, the implementing agencies would work with project participants to revise proposals to ensure they are consistent with established CDM project criteria and guidelines.	• Reduce the need to create a new bureaucracy to support project identification and proposal development activities, and thus would reduce up-front administrative costs. • Institutional knowledge, lessons learned through the involvement of implementing agencies in the Multilateral Fund and GEF project cycles could be applied to the CDM to further reduce administration costs and maximize project cycle efficiency • Can lead to competition among the implementing agencies which can help to ensure that a sufficient number of credible project are identified and developed. • Potential problems can occur if the process of revising proposals becomes onerous and overly bureaucratic, or if the project approval process is influenced by political relationships between the review body and the implementing agencies.
Option B: Draw from National and Regional Institutions established during the AIJ pilot phase	
• national and/or regional institutions would serve a variety of functions. For example: ▪ work with project developers and host country governments to help identify viable GHG emission reduction projects, ▪ develop project proposals for submission to the CDM project review body (e.g., the Executive Board or a Secretariat). ▪ work with project participants to revise proposals based on comments from the review body. • Under a more decentralized structure, these national/regional institutions could be designed to perform project review functions, that is consistent with standards and guidelines established at the international level	• Would borrow heavily from the technical work, institution knowledge, and lessons learned of the AIJ pilot phase, which could help to reduce administration costs and maximize project cycle efficiency • May be inconsistent with Canada=s interest in making a clear distinction between the CDM and the AIJ pilot phase • Imposing some level of standardization for identifying projects, developing proposals, and in particular, reviewing projects, across these national/regional CDM bodies would likely be extremely difficult • Would provide Canada with the opportunity to provide direct input into the project development and review process as well as participate in the multilateral process designed to oversee the CDM.
Option C: Allow participants to submit project proposals directly to the CDM	
• Project participants would receive necessary guidance directly from the EB or some intermediary body, if created (e.g., a Secretariat). • Project participants would receive the minimal support required to identify the appropriate contacts within host country governments and to understand the project criteria and guidelines.	• Would require less coordination with an international bureaucracy, which could make the CDM appear more attractive to private sector participants • Would be difficult to enforce standardization of project proposals • Given the complex legal arrangements and necessary coordination among project participants, host country governments, and the CDM approval body, it may be extremely costly for participants to develop projects without some institutional support.
Option D: Hybrid approach *(Interdepartmental preference)*	
• first two options may be implemented in complementary fashion.	A precedent for this is the Multilateral Fund under the Montreal Protocol where countries contributing funds are permitted to withhold 20% of their contribution for use in projects and other activities managed by their bilateral agencies.

TABLE 3: HOW COULD THE CDM ASSIST IN THE TRANSFER OF CERs	
Description	**Pros & Cons**
Option A: Establish a CDM Carbon Fund	
• Would act as a market intermediary by establishing a network of private and public investors in Annex I countries to fund CDM projects in developing countries. • Would provide an efficient mechanism for buyers and sellers to exchange CERs. • Would consist of a well-diversified portfolio of emission reduction projects arranged via standardized deal-making. • Under such an arrangement, a carbon fund manager could be appointed to develop strategies to mitigate project portfolio risks. • The project fund manager could be a CDM Secretariat member, if such an entity is created. • Alternatively, the carbon fund could be housed within one of the implementing agencies.	• An analogy for this fund is the World Bank=s Prototype Carbon Fund • Could reduce transaction costs and risk exposure through portfolio diversification. • Although transaction costs associated with such a fund are likely to be lower than those with direct project investments, carbon fund management costs will not be negligible. • Given the risks associated with developing projects in developing countries, devising an effective investment strategy for a portfolio of such projects will be difficult. • Investors= confidence in such a fund will depend on the credibility of the fund manager • Costs associated with investment strategy development and fund manager compensation will increase transaction fees. • Exchange rate risks could further increase these costs unless appropriate strategies are employed to hedge CERs against currency fluctuations through options markets.
Option B: Allowing Trading Through Bilateral/Multilateral Agreements *(Interdepartmental preference)*	
• Would allow private and/or public sector entities interested in obtaining CERs to directly participate in project decision-making and development activities. These activities include: finding project partners, proposal preparation, GHG estimations, contract negotiation, host country approval, monitoring, etc. • Alternatively, project investors could work through a broker, who could identify viable projects and perform any number of the required project activities on the investor=s behalf. • Depending on the number of project participants, project agreements could be bilateral or multilateral in nature.	• Such agreements would reflect a process of project negotiation and development similar that supported by many national AIJ programs under the AIJ pilot phase. • Lessons learned during the AIJ pilot phase could be easily applied to the CDM project development process. • Given the wide range of somewhat complex and time-consuming activities involved in developing a CDM project, the transaction costs associated with direct participation in project development may be prohibitively high. • Some investors may want to obtain CERs without getting involved in project decision-making and development activities.
Option C:Allow Non-Annex I Entities to Trade CERs Generated by Projects without Annex I Participants. *(Canada is opposed)*	
• The CDM EB would be responsible for providing guidelines for eligibility and potentially for reviewing the application for CERs. • The CERs generated through such projects could then be sold by developing countries to public or private entities in Annex I countries.	• The Costa Rican model of Certified Tradable Offsets is an example of this approach.
Option D: Hybrid Approach.	
Some investors may not want to directly participate in project development activities, and thus would find a carbon fund the most desirable means to acquire CERs. Others may want to maintain a greater level of control over their investments, or play a more active role in the project development process, and thus, may want to engage in bilateral agreements or direct trades with non-Annex I sellers.	• CDM participants will have maximum flexibility in obtaining CERs. • could make the CDM both accessible and attractive to the wide range of buyers and sellers, and thus increase the overall number of entities participating in CER transfers • However, it may be difficult to manage multiple CER transfer mechanisms, and thus this option could increase overall CDM administrative costs.

TABLE 4:	SHOULD THERE BE RESTRICTIONS ON THE TYPES OF PROJECTS INCLUDED IN THE CDM?

Option A: Include all Land-Use and Forestry Projects

Article 12 is silent on whether eligible projects include enhancing or removal of sinks. Several points argue for the inclusion of land-use change and forestry projects:

- these projects are typically cost effective, so attractive for investors;
- in addition to GHG reductions, these projects provide significant ancillary benefits for the host country,
- certain developing countries and NGOs already hold a strong interest in this class of projects
- it makes sense to include a wide range of options in the CDM, thereby increasing the flexibility and cost-effectiveness from potential investors; and
- a significant number of land-use change and forestry projects have already been implemented under the AIJ pilot program, and this on-the-ground experience can used as a foundation from which to build an even stronger program of GHG reduction projects in developing countries under the CDM.
- However, all of these arguments must be weighed against the aspects of these projects that make them risky GHG reduction investments: their GHG benefits *can* be lost, measurement of emission reductions is complex, and the development of credible baselines is difficult.

Option B: Exclude Only Forest Preservation Projects

An alternative to would be to exclude forest preservation projects from the CDM, i.e., agree that paragraph 3 of Article 3 of the Protocol governs Article 12.

- Forest preservation is risky due that is common to all forestry projects and due to difficulties associated with the development of credible baselines.
- Projecting deforestation rates with certainty, especially over long time frames, is difficult at best. This is due to numerous complex, interactive, and often poorly understood controlling factors, as well as unreliable or unavailable historical data.
- However, it is important to keep in mind that developing credible baselines for energy projects, as well as other forestry projects, is not straightforward either.
- forest preservation projects tend to be low cost and to produce significant, and attractive, ancillary benefits for the host country.
- Generation of ecotourism revenue is a particularly attractive, and unique, ancillary benefit of forest preservation projects.
- Once a baseline is defined, the GHG benefits of such projects are relatively simple to measure (assuming the forest is mature and relatively uniform ecologically).
- such projects are uniquely relevant to the tropical developing countries because this group of countries that is currently experiencing the highest deforestation rates.
- Excluding this type of project might discourage certain developing countries from participating in CDM,
- Conversely, including forestry projects would help promote and provide incentives for sustainable forestry management practices

Option C: Exclude Land-Use and Forestry Projects

- Under the AIJ pilot phase, certain types of emission reduction projects have been considered to be more risky than others due to questionable permanence of the expected GHG benefits and to difficulties associated with accurate measurement of emission reductions. Conversely, once an energy project achieves emission reductions, those reductions can never be lost (although these projects, as well as forestry projects, are subject to leakage).
- Area sources and sinks typically involve several flux pathways, such as soil carbon accumulation, biomass growth, and decay of wood products, all of which vary in space and time due to factors such as rainfall, soil type, and land management techniques.
- Estimates of net annual flux for such projects are usually quite uncertain, and accurate measurement of flux once a project begins, while not difficult, is often labor intensive, and therefore, may be relatively expensive.
- For these reasons, some countries, NGOs, and other groups have argued that land-use change and forestry activities should be excluded from measures that may be used to meet national emission reduction commitments.
- However, forestry projects, especially in developing countries, are often low cost (on a per unit of GHG reduction basis), and have attractive ancillary benefits, including biodiversity conservation, watershed protection, and revenue generation through the production of wood and non-wood products.

TABLE 5:HOW SHOULD MEASURING/MONITORING PROTOCOLS AND VERIFICATION/CERTIFICATION PROCEDURES BE DESIGNED?	
Description	**Pros and Cons**
Option A: Design Generic Project guidelines	
♦ The measuring/monitoring protocols and verification/certification procedures could be designed as generic instructions, in the same way as measurement and verification guidelines for many national AIJ programs are designed. ♦ Such an approach would provide general guidance for all projects, rather than guidance that is specific to particular types of projects.	♦ This approach is consistent with two strategic policy objectives regarding the CDM: minimization of transaction costs, and encouragement of participation. ♦ However, with only generic guidance, the CDM would run the risk of reduced transparency and accuracy of estimated GHG benefits, and therefore reduced certainty of results. ♦ would also likely result in inconsistencies among projects, an effect already observed in national AIJ program results. ♦ While generic measuring/monitoring protocols and verification/certification procedures may increase participation in the CDM, this increased participation may come at the expense of decreased real GHG benefits. ♦ A further disadvantage is that it would be more difficult to grant certification and to obtain international credibility for CERs.
Option B: Design Project Type-Specific Guidelines *(Interdepartmental preference)*	
♦ An alternative approach would be design measuring/monitoring protocols and verification/certification procedures that are specific to project types. ♦ The level of detail required by this approach would have to be carefully evaluated. For example, guidelines might be developed for renewable energy projects or might be disaggregated further by *type* of renewable energy project. ♦ Another consideration would be leakage and potential reversal of project benefits ♦ Similarly, an argument could be made that project-specific, or economic sector specific, baselines should be developed for individual countries (e.g., a power sector baseline for Costa Rica). This would result in greater consistency across projects, but developing such baselines and ensuring that they are acceptable to the host countries would increase the administrative burden of the CDM considerably.	♦ This approach does not necessarily have to be more burdensome to the project developers than the generic approach, ♦ It might result in easier implementation because the procedures would be more clearly defined. ♦ This approach would also likely increase the accuracy of estimated emission reductions, and therefore, the certainty of emission reductions. ♦ Nevertheless, work on this topic through the AIJ pilot program can provide useful guidance for determining the appropriate level of detail and desegregation for CDM.

TABLE 6:COMPATIBILITY BETWEEN EMISSION REDUCTION UNITS ACHIEVED THROUGH JI, CDM AND EMISSION TRADING	
Description	**Pros and Cons**
Option A: Consolidate CDM and JI under One Institutional Framework	
Since the CDM and JI among Annex I countries are both project-based cooperative mechanisms, and thus will operate based on similar administrative and technical processes, these mechanisms could be managed and implemented by one institutional framework.	• Combining management and implementation of these mechanisms under one bureaucratic structure, would substantially reduce the overall administrative costs. • However, it could be perceived as reminiscent of AIJ, and thus inconsistent with Canada=s interest in making a clear distinction between the CDM and the AIJ pilot phase. • Furthermore, developing countries would likely oppose this merging of the institutional frameworks.
Option B:Establish Consistent Measurement/Monitoring Protocols and Verification/Certification Procedures for the CDM and JI *(Interdepartmental preference)*	
• measuring/monitoring protocols and verification/certification procedures should be designed to ensure that project GHG benefits are real, measurable, and long-term. • As project-based cooperative mechanisms, the CDM and JI will encounter similar issues when developing these protocols and procedures. • Given the similarities between the CDM and JI, one set of measuring/monitoring protocols and verification/certification procedures could be developed for both mechanisms. • One way to do this, for example, would be to establish independent organizations accredited by COP/MOP.	• This would reduce the up-front administrative cost associated with establishing these protocols and procedures, while ensuring that CERs and ERUs generated through CDM and JI projects are both credible and comparable.
Option C: Develop National Level Baselines to Measure CDM and JI Benefits	
• Under this option, developing countries interested in hosting CDM or JI projects could be required to develop national baseline emission projections, with a breakdown of emissions by sector or subsector. These national baselines could then be used to estimate the GHG benefits of CDM and JI projects. • Since developing credible national baselines requires significant technical and financial resources, developing countries would likely need technical assistance from CDM/JI institutions.	• Although the up-front costs associated with developing these baselines may be high, once in place, they would help to increase the comparability and credibility of CDM and JI project emission reduction estimates. • Moreover, the existence of national level baselines would significantly reduce the data collection costs incurred by CDM and JI project developers. For example, under many national AIJ pilot programs, project developers have been required to supply a range of national, sector, and project-level data to develop a baseline emission projection that credibly demonstrates that the project GHG benefits claimed are real, measurable, and additional. • As expressed by many AIJ project developers, the costs associated with meeting these data requirements often exceed what they were willing or able to pay. With credible national baselines in place, project developers would not be required to develop their own baseline projections. • national baselines could reduce transaction costs and risks associated with certified emissions reductions (CERs) and emissions reduction units (ERUs), making the CDM and JI more attractive to investors.

TABLE 7: DEFINING SHARE OF PROCEEDS	
Description	**Pros & Cons**
Option 1: The CDM Could Charge Fixed Fees *(Interdepartmental preference)*	
♦ The CDM administrative expense and climate change adaptation funds could be financed through fixed fees charged to CDM investors. ♦ Alternatively, rather than require CDM investors to provide all resources to support these funds, Annex I country governments could be required to make a fixed fee contribution. ♦ One option for collecting fees from Annex I country governments would be to charge a fixed fee, based on the countries= standard share of contributions to the United Nations annual operating budget. ♦ Such a formula was used as the basis for determining the relative fees each country must contribute to the Multilateral Fund of the Montreal Protocol. ♦ An alternative possibility would be to base the allocation of fees on countries= share of 1990 GHG emissions and then to update the allocation formula on a yearly basis.	♦ The main advantage of requiring fixed fees is that Canada and other countries would have some certainty about the budget for the administrative fund and the fund to assist developing countries impacted by the adverse effects of climate change. ♦ In the case of contributions being based on the share of countries= GHG emissions, an incentive is built in for countries to reduce their contributions to CDM management expenses by reducing emissions. Developing countries would likely perceive such a system of contributions to be equitable.
Option 2: The CDM Could Charge Variable Fees	
Description	**Pros & Cons**
♦ Variable fees could be determined up-front by charging the generators of CERs a transaction fee or at the back-end by charging those applying for CERs a transaction fee. For example, the World Bank=s Prototype Carbon Fund charges a fixed up-front fee for participants. ♦ A hybrid option of charging both front-end and back-end fees is also possible. An analogy for this is the management fees associated with mutual funds where fees can be either front or back-loaded. Another example is the administrative charge of 13% used by the Implementing Agencies (IA) to the Multilateral Fund of the Montreal Protocol. All projects proposed to the Fund have an additional 13% IA management charge, regardless of the scale of the project. ♦ Because there are usually economies of scale associated with managing larger projects, another variation on this option would be to have a sliding scale for fees based on the size of the project, either in terms of its GHG benefits of total costs. ♦ Other options for collecting fees for the management expenses include charging a fee based on the total number of MMT of carbon equivalent emissions reduced or the number of CERs that are requested.	♦ In all cases where variable fees are used, there is less certainty associated with the overall fees that will be generated to cover management and administrative expenses.

TABLE 8:HOW COULD THE CDM PROVIDE INCENTIVES FOR PRIVATE SECTOR PARTICIPATION

For the private sector to participate meaningfully in the CDM, the mechanism will need to be designed and operated in such a way that the transaction costs of participation are low, risks associated with CDM projects are minimized, and the CERs providing through the CDM have international credibility.

With regards to the administrative framework of the CDM, it will be critical for Canada to ensure that the processes governing the CDM are not overly bureaucratic or onerous. The project cycle of identification, proposal preparation, presentation for approval, approval, and project implementation must be transparent. If the Executive Board is designed to function as a Subsidiary Body with technical experts appointed to serve, it may be desirable to select some of the experts from the private sector. Similarly, if the Executive Board functions more as a Board of Directors with a Secretariat responsible for management tasks, it may be important to have one member of the Secretariat be appointed from the private sector and to be
responsible for liaison with industry.

The approach to project identification and proposal development must ensure that incentives are in place for private sector entities to prepare and submit high quality project proposals. Regardless of the option selected guidance to private sector entities must be clear. At the same time, public agencies involved in catalyzing project identification and proposal development should not favor technologies. Rather one of their roles could be to provide objective information about technologies that will enhance awareness about them in developing countries. In addition, information about the non-GHG emissions reduction benefits of specific technologies must be made available (i.e., the ancillary environmental, social, and economic benefits associated with proposed projects.) In the AIJ pilot phase, this was one of the critical needs identified by developing countries.

The CDM must also transfers CERs in such a way that transaction costs are minimized and the integrity of the CERs is maintained. Project investors typically quantify the resources required for participating in mechanism such as the CDM and thus the indirect costs imposed by the CDM must be kept to a minimum to ensure wider participation. If the Carbon Fund option is selected, the investor=s confidence in the mechanism will depend upon the credibility of the fund manager chosen.

TABLE 9:HOW COULD THE CDM PROVIDE INCENTIVES FOR DEVELOPING COUNTRIES PARTICIPATION	
Description	**Pros & Cons**
Option 1: Use the Share of Proceeds for Administrative Expenses and Assistance with Adverse Impacts as an Incentive Mechanism for Climate Change Mitigation. *(LDCs that need adaptation are not necessary those that need mitigation)*	
♦ the share of proceeds would be allocate to developing countries based on their willingness to participate in climate change mitigation activities. ♦ For example, the CDM could offer such funds under the agreement that recipients host CDM projects or undertake other measures to reduce GHG emissions, or it could offer funds to developing country governments in exchange for agreements that they undertake energy efficiency upgrades at their facilities, or implement polices to reduce emissions in the transportation sector. ♦ Since estimating the amount of emission reductions associated with these measures is highly uncertain, the amount of CDM credits generated by these actions would not be subject to the same rigorous quantification and verification criteria required of CDM projects.	♦ would allow the CDM to encourage P&M that generate substantial reductions, but are not easily measured or verified and, thus, may not be captured through standard CDM projects or other cooperative mechanisms. ♦ would be difficult to ensure that government activities are in addition to actions that would have been undertaken in the absence of the distribution of the funds. ♦ does not ensure that the countries most vulnerable to the adverse effects of climate change would be the recipients of these funds. ♦ placing such conditions on the allocation of funds may be highly contentious, particularly from the perspective of developing countries vulnerable to the impacts of climate change
Option 2:Establish a Fund to Help Developing Countries Defray Increases in the Marginal Cost of Mitigating GHGs that Could Occur through Hosting CDM Project. *(Canada does not support it)*	
Many developing countries have expressed concern that project-based flexibility measures will lower their national GHG emissions and thus lower their national baselines. Increasing marginal costs of emission control associated with these lower baselines, may raise the cost of control if and when developing nations commit to future emission reduction targets. To address this concern, the COP/MOP could establish a fund to help developing countries defray any increase in the marginal cost of mitigating GHGs that may have occurred with the implementation of CDM projects.	♦ would require Annex I countries to commit additional resources to support this fund. ♦ If Annex I investors in CDM projects are required to contribute to this fund, it will decrease the cost-effectiveness of purchasing CERs and may reduce private sector participation in the CDM. ♦ calculating the increase in the marginal cost of GHG mitigation in developing countries that could result from CDM project implementation would be analytically difficult. ♦ would involve creating a separate fund
Option 3: Establish a Capacity Enhancing Fund *(Canada does not support it)*	
Developing country concerns regarding project-based flexibility mechanisms often are tied to the notion that monitoring, verifying, and enforcing emission reduction activities can be extremely difficult and costly. Developing nations may lack adequate institutional capacity needed to negotiate the terms of CDM projects and to ensure national renewable and non-renewable resources are used in a manner consistent with their development objectives. To address these concerns, the COP/MOP could establish a fund for training and capacity building in developing countries. This fund could provide methodologies, workshops, and training in monitoring and verification activities. This fund could also provide resources to clearly define developing country national goals and priorities, build up research and management capacity, and identify technological and financing needs.	♦ would enable developing countries to direct CDM investments and technology transfer to areas generating developmental benefits. ♦ would require additional contributions from Annex I countries. ♦ If such a fund is supported by a share of CDM project revenues or fees collected from CDM participants, it will decrease the cost-effectiveness of CERs and may discourage private sector participation in the CDM.

TABLE 10 FUNCTIONS AS DESCRIBED UNDER ARTICLE 12 ON CDM

COP/MOP

Functions:

- Provides guidance and makes final decisions on all aspect of the CDM (Article12.4)
- Determines how Parties included in Annex I may use the certified emission reductions accruing from such projects activities to contribute to compliance with part of their quantified emission limitation and reduction commitments under Article 3 (Article 12.3 b)
- Designates operational entities that will certify emission reductions resulting from each project activities (Article 12.5)
- Elaborate modalities and procedures to ensure transparency, efficiency and accountability through independent auditing and verification of project activities (Article 12.7)
- Ensure that a share of the proceeds from certified project activities is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation (Article 12.8)

EXECUTIVE BOARD (EB)

Functions:

- Supervises the CDM (Article 12.4)
- May provide guidance on the participation under the CDM (Article 12.9)

CLEAN DEVELOPMENT MECHANISM (CDM)

Functions:

- Assists Parties not included in Annex I in achieving sustainable development in contributing to the ultimate objective of the Convention (Article 12.2)
- Assists Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3 (Article 12.2)
- Assists in arranging funding of certified projects activities as necessary (Article 12.6)

OPERATIONAL ENTITIES

Function:

- Certifies emissions reductions resulting from each project activity, on the basis of:
  - (a) Voluntary participation approved by each Party involved;
  - (b) Real, measurable and long-term benefits related to the mitigation of climate change;
  - (c) Reductions in emissions that are additional to any that would occur in the absence of the certified project activity (Article 12.5)

OTHER PARAGRAPHS UNDER ARTICLE 12

- Article 12.3 a: *Under the CDM, Parties not included in Annex I will benefits from project activities resulting in certified emission reductions*
- Article 12.10: *Certified emission reductions obtained during the period from the year 2000 up to the beginning of the first commitment period can be used to assist in achieving compliance in the first commitment period.*