

**National Report to the Fourth Session of the
United Nations Forum on Forests**

Canada

April 5, 2004

Y:Registry of Docs & BFNs: 2004: IAD:UNFF 4: CDA UNFF 4 Report (Canada Report to UNFF 4 draft April 1 2004.doc)

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II. Progress and issues related to implementation of IPF/IFF proposals for action

General

1. Please provide additional or new information on initiatives taken or lessons learned since 1997 further to the information on forests included in your national reports to UNFF 2 and UNFF 3, the Commission on Sustainable Development, and other international instruments and organizations on the following points:

- **“Assessment (including of the relevance, priority, status of implementation, planned actions) of the IPF/IFF proposals for action in the national context”**

National Forest Inventory

Starting in the fall of 1997, federal and provincial/territorial governments embarked on the development of a new National Forest Inventory. (For more information on Canada’s NFI, please see http://www.pfc.cfs.nrcan.gc.ca/monitoring/inventory/canfi/cnfi-overview_e.html).

The Canadian Forest Service of Natural Resources Canada (CFS) has periodically compiled national forest inventories (CanFI) by aggregating provincial, territorial and other forest management inventories. The most recent compilation is CanFI 2001, to be released in 2004. Detailed stand-level data provided by forest management agencies are converted to a national classification scheme, and aggregated for analysis and reporting. These periodic inventories cannot accurately estimate change because apparent changes may reflect differences in definitions, methodology or the extent of forest inventory since the last compilation rather than real changes in the resource. Most recent changes to provincial forest inventories reflect an evolution from a timber to a vegetation focus, resulting in more detailed classifications systems.

To strengthen the existing inventory design and to meet new demands Canada has embarked on the development of a new plot-based National Forest Inventory (NFI) to better assess and monitor the extent and sustainable development of Canada’s forests in a timely and accurate manner. The NFI will provide:

- Timely data reflecting the state of the resource at a defined time;
- National data with uniform definitions (consistent with international definitions), collected to the same quality standards;
- Data that reflect consistent and complete area coverage;
- Data suited for accurate assessment of ecological change;
- Data on non-timber resources.

The NFI supports the multiple forest values embodied in the Canadian Council of Forest Ministers Framework of Criteria and Indicators and the Montreal Process Criteria and Indicators, and provides data for national and international initiatives. With the new NFI, Canada will be

better able to provide data for the post-2005 Forest Resource Assessments (FRA) of the Food and Agriculture Organization of the United Nations (FAO).

The NFI is an interagency partnership. The CFS, under the guidance of the Canadian Forest Inventory Committee, coordinates NFI activities. Through the interagency arrangement, the provincial and territorial partners develop their designs and provide data. The federal government's role is to develop the standards, procedures, and infrastructure, and to conduct the analysis and reporting. The NFI is being implemented through agreements between the federal government and the partner provinces or territories. The field implementation has begun in most jurisdictions, and the expectation is that the remaining jurisdictions will begin implementation in 2004.

Other developments on the NFI include progressing on the information management systems in conjunction with the development of the National Forest Information System (discussed below), implementing compilation and estimation procedures, and conducting operational research into annualizing the NFI, with the cooperation of the US Enhanced Forest Inventory and Analysis Program.

Definitions

Canada is aware of the problems associated with incompatible terms and definitions and supports the international process of harmonizing forest-related definitions led by FAO in collaboration with IPCC, IUFRO, CIFOR and UNEP and participated in both expert meetings held in 2002. The FAO was requested in 2001 to continue its work on forest definitions because the use by countries and international processes of different terms and definitions affects policy discussions at the international level. Canada supported this request.

National Forest Information System

Addressing the need for comprehensive information on Canada's forests, a National Forest Information System (NFIS) is under development to provide for the access, integration, analysis and delivery of diverse spatial and thematic forest resource information holdings in support of national and international reporting requirements for sustainable forest management. National in nature, NFIS will enable the consolidation, coordination and analysis of dispersed forestry-related information held by resource management agencies such as federal, provincial and territorial governments and others. This Web based information interoperability makes possible the integration and reporting of forest information necessary to respond to issues associated with criteria and indicators of sustainable forest management, climate change, biodiversity and other related issues and opportunities. Connectivity to federal, provincial and territorial jurisdictions is nearing completion and activity is now on developing services and applications. (For more information on NFIS see <http://nfis.org/index.html.en>).

Earth Observation for Sustainable Development of Forests

The Earth Observation for Sustainable Development of Forests (EOSD) is another program contributing to the monitoring of Canada's forests. EOSD is a joint CFS and Canadian Space Agency project that is producing a land cover map of the forested area of Canada based on

Landsat data. Land cover products are being produced through a partnership of federal, provincial and territorial governments, universities and industry. These products will contribute to the efforts of the NFI and forest carbon accounting as well as national and international reporting commitments. Mapping the land cover in the forested area of Canada is expected to be complete in early 2006. (For information on the Canadian Space Agency please see <http://www.space.gc.ca/asc/index.html> and for further information on EOSD see <http://www.pfc.cfs.nrcan.gc.ca/eosd/>)

Kyoto Protocol

Following the ratification of the Kyoto Protocol by Canada in November 2002, the CFS has continued to work with other federal departments and provinces/territories to put in place the policy and forest carbon measurement systems required to satisfy Kyoto Protocol rules, and is investigating opportunities to maximize forest sinks.

The National Forest Sinks Committee, chaired by the CFS, was formed in December 2001. This federal, provincial and territorial committee comprised of forestry officials is the major contact point for joint work on Kyoto Protocol forest carbon issues across jurisdictions. The Committee coordinates joint analytical work on forest-related domestic policy issues facing federal, provincial and territorial governments following the agreement on the Marrakech Accords. The Committee's work plan includes improving estimates for forest sinks and sources, better understanding the risks, assessing the potential to increase the forest contribution, and strategies to reduce deforestation. The Committee holds meetings twice a year, with ongoing work carried out by three working groups.

CFS is part of the substantial work underway within the federal government to evaluate offset system design options as part of a domestic emissions trading system also under development. An offset trading system (OTS) is one way to attract project investment to increase the potential forest contribution. Forestry projects that are being considered for inclusion in the OTS are afforestation, reforestation, some forest management projects, and avoided deforestation projects. Consultations with provinces, territories and stakeholders occurred in June 2003 based on a federal *Offset System Discussion Paper*, and it is expected that a *Design Paper* will be released in 2004.

On November 6, 2003, the federal government signed a climate change Memorandum of Understanding (MoU) with the Forest Products Association of Canada (FPAC). The MoU covers companies with operations in every region of Canada involved in the production of pulp, newsprint, paperboard and other paper products. The agreement addresses a number of key areas, including emissions reductions for the first commitment period, designing ways to assess early actions by industry leaders, greater reliance on low-emissions energy sources like biomass and combined heat and power (co-generation), future incentives to increase research and development in carbon-reducing technologies, and a policy framework to recognize the benefits of investments in long-term forest management in meeting Canada's climate change objectives. The MoU marks the first agreement with industry to implement the strategy set out in the *Climate Change Plan for Canada* released in November 2002 and outlines an approach that the pulp and paper industry will take to reduce GHG emissions to achieve its share of Canada's large final emitter target.

The Government of Canada is investigating afforestation and reforestation as for their potential to help contribute to Canada's climate change commitments. Through the Government of Canada Action Plan 2000 on Climate Change, the Feasibility Assessment of Afforestation for Carbon Sequestration (FAACS) initiative is exploring the feasibility of large-scale afforestation as an effective response to Canada's climate change commitments. Information has been obtained on landowner's interest in afforestation and on various incentives that could be applied to encourage afforestation. Assessment research to identify land suitability and economic potential for future afforestation is currently underway. These activities under FAACS are scheduled for completion by the end of March 2005.

Building on the work of the FAACS initiative, the Government of Canada will enhance its efforts to demonstrate and assess the use of fast growing plantations to sequester carbon and combine with it the fibre supply dimensions of plantations. Under the Forest 2020 Plantation Demonstration and Assessment Initiative, Canada will establish fast growing plantation demonstrations to sequester carbon and generate fibre and explore investment mechanisms to attract private funds into future plantations. This two-year initiative was announced as part of the Government of Canada's August 12, 2003 investment in the Climate Change Plan for Canada (http://www.climatechange.gc.ca/english/publications/announcement/climatechange_investment.html) and is in the initial stages of implementation.

An initiative is underway to better understand and assess carbon sequestration in Canada's forests. The initiative builds on the NFI as well as ongoing scientific research on carbon budget modelling. This carbon accounting work is being undertaken to help meet Kyoto Protocol forest sink reporting requirements, and to provide information for policy-makers on a broader range of forest values. Efforts are underway to better understand and assess carbon sequestration in Canada's forests. The NFI and EOSD initiatives contribute directly to forest carbon modelling and indirectly to scientific research that enhances knowledge of processes required to understand, assess and model carbon sequestration in Canada's forests. The work supports analysis of information for international reporting requirements and provides information for policy-makers on a broader range of forest values.

To support Canada's reporting requirements under both UNFCCC and Kyoto Protocol, the National Forest Carbon Monitoring, Accounting and Reporting system, a federal initiative involving researchers from across Canada, is developing the national forest carbon accounting framework. This system is being built upon decades of science as well as current research by federal departments, provincial and territorial agencies, the forest industry, universities, and others. Components include infrastructure for information exchange between parties, carbon measurement and accounting for FAACS and Forest 2020 initiatives, and carbon budget models for various spatial scales. (For more information on the national forest sector carbon monitoring, accounting, and reporting system see <http://warehouse.pfc.forestry.ca/pfc/19609.pdf> or visit <http://carbon.cfs.nrcan.gc.ca/>)

Federal departments are working together to develop a shared inventory of land-use change in Canada since 1990 to streamline the exchange of information between federal agencies for Kyoto Protocol reporting. The shared inventory will bring together information on afforestation, reforestation, and deforestation, including information from the national

deforestation mapping program and the new internet-based National Afforestation Inventory (NAI).

- **“Development and implementation of your national forest programme or similar national policy framework for forests”**

National Forest Strategy

Canada has introduced its fifth *National Forest Strategy (2003-2008)*, *A Sustainable Forest: The Canadian Commitment* and third *Canada Forest Accord*, both to advance national objectives and fulfill international commitments over the next five years and beyond. The new National Forest Strategy (NFS) is Canada’s updated response to the UNFF call for the formation and implementation of national forest programmes. By design, the NFS serves to demonstrate Canada’s awareness of the importance of its forest to Canadians and the global community.

The NFS is a voluntary action plan that articulates Canadians’ vision for their forest heritage and challenges them to achieve consequential improvements in sustainable forest management policies and practices, as well as to strengthen the competitiveness of Canada’s forest sector. It does this by defining strategic targets and priority activities for the forest sector at large to implement. The key priorities and overall vision for Canada’s forest were determined by consensus through extensive cross-country consultations and recommendations arising from the independent final evaluation of the 1998-2003 NFS.

Presented at Canada’s 9th National Forest Congress (Ottawa, May 1-2, 2003) and featured at the XII World Forestry Congress (held in the City of Québec, September 21-28, 2003), the newest NFS reaffirms the Canadian commitment to work together voluntarily to advance sustainable forest management. The vision is:

The long-term health of Canada’s forest will be maintained and enhanced, for the benefit of all living things, and for the social, cultural, environmental and economic well-being of all Canadians, now and in the future.

To realize the vision, the NFS has eight strategic themes. As these themes form the NFS, they are all related to UNFF element 1) *Formation and Implementation of National Forest Programmes*.

1) Ecosystem-based management

Manage Canada’s natural forest using an ecosystem-based approach.

2) Sustainable forest communities

Develop legislation and policies to improve the sustainability of forest-based communities.

3) Rights and participation of Aboriginal peoples

Accommodate Aboriginal and treaty rights in the sustainable use of the forest recognizing the historical and legal position of Aboriginal peoples and their fundamental connection to ecosystems.

4) Forest products benefits

Stimulate the diversification of markets, forest products and services and benefits (both timber and non-timber).

5) Knowledge and innovation for competitiveness and sustainability

Maintain and enhance the skills and knowledge of forest practitioners and mobilize the broader Canadian knowledge community to establish a new forest innovation agenda for Canada.

6) Urban forest and public engagement in sustainability

Actively engage Canadians in sustaining the diversity of benefits underlying the importance of Canada's forest, including the urban forest.

7) Private woodlots' contribution to sustainability

Increase the economic, social and environmental contribution by Canadian woodlot owners to Canadian society through a concerted effort to strengthen policies and services.

8) Reporting and accountability

Create a comprehensive national forest reporting system for all valued features of the forest, both urban and rural.

With the new NFS, Canadians have an updated national direction to advance sustainable forest management, nationwide. As in the past, the NFS aims to guide the forest community in the pursuit of sustainable forestry through progressive legislation and policies, renewed national programs, local and regional strategies, and tools and practices for sustainable forest management. Many of the IPF/IFF Proposals for Action have been, and will continue to be, addressed in Canada as a result of implementation of the current and future National Forest Strategies, as well as a myriad of other federal, provincial, territorial and stakeholder initiatives and programs that aim to improve sustainable forest management in Canada.

The NFS was developed through extensive cross-country consultations and public dialogue within the forest community, including municipal, provincial and territorial government officials, industry representatives, Aboriginal peoples, researchers and academics, practitioners, environmentalists, and private woodlot owners.

To strengthen the commitment toward overseeing the NFS implementation, Canadian forest ministers, as well as heads of industry and other non-governmental organizations are joining in signing the third *Canada Forest Accord*. The Accord is a consensus document that complements the Strategy and serves to prominently showcase signatories in a way that reaffirms national consensus. In doing so, signatories become members of the new National Forest Strategy Coalition (NFSC).

The NFSC promotes voluntary implementation of the Strategy across Canada, and it advises the Canadian Council of Forest Ministers (CCFM), as the public trustee, on NFS-related progress and achievements. The NFSC encourages the development of public and measurable action

plans, facilitates partnerships, advocates support and participation, and will report on progress. The CCFM's Criteria and Indicators of sustainable forest management are being considered in determining a method to report and measure progress. The 2003-2008 NFSC membership is anticipated to exceed the 52 governmental and non-governmental members of the previous 1998-2003 NFSC.

- **Mechanisms or initiatives to facilitate stakeholder participation, including indigenous and local communities, in forest sector planning, decision-making and/or forest management.**

Canadians understand that public participation is inextricably linked to the achievement of sustainable development. Recent trends in public participation across Canada indicate that the public's involvement is accepted as an essential part of policy, program and project development. Public participation is widespread in planning and decision-making concerning key aspects of Canadian life, including in the areas of education, health, the economy, the environment, natural resource management and foreign policy.

The Canadian government promotes and respects the importance of involving Canadians in decisions that affect them. Increasingly governments and organizations (public and private) have developed principles to guide their decisions and actions related to public participation. Federal Guidelines affirm the democratic right of Canadians to have their views considered in government decision-making. They also affirm the need for active involvement on the part of Ministers, senior managers, departments and central agencies in supporting a consultative culture in the Government of Canada. Moreover, federal departments must identify in each Memorandum to Cabinet the key stakeholders consulted, the consultation process employed, the outcomes, and any follow-up consultations planned as part of the implementation of a policy.

Regarding Canada's forests, the ultimate responsibility for the management of public forests, accounting for more than 90% of Canada's forest estate, rests with elected governments. Yet all jurisdictions recognize the value of direct public input. Canadians are committed to achieving sustainable forest management, whether on public or private lands. Reflecting this objective, all levels of government, the Aboriginal community, civil society, the private sector and other interested parties cooperate, each according to their mandate, to forge a consensus on what it means to practice sustainable forest management on the ground.

Across Canada, provinces and territories have a variety of public-involvement mechanisms such as local public advisory groups. In Ontario for example, there is a mandatory and formal public consultation program in forest management and land use planning. In addition, Local Citizens Committees for each management unit have been established throughout Ontario. Across the country, some have the view that the public should have a broader mandate to assess the management structure of Canada's forests. Central to the pursuit of this goal is the need to continue to strengthen partnerships among a diverse array of stakeholders, each engaging openly with the desire to understand the needs of others so as to identify common objectives and effective actions. While the goal has not yet been reached, this sense of purpose is found in virtually all aspects and at all levels of forest management in Canada.

National Forest Congress

While the NFS and *Canada Forest Accord* are important documents, the national consultation process leading to them is also a significant development. Through citizen engagement, new issues continue to be raised, ongoing issues redefined and new objectives and commitments formulated ... all through voluntary participation that helps to create greater understanding and consensus. The implementation of Canada's newest NFS and the signing of the companion *Canada Forest Accord*, are key examples of voluntary mechanisms that facilitate stakeholder participation. Both challenge Canadians to move forward individually and in partnership toward a sustainable forest at home and abroad.

Unveiled at the 9th National Forest Congress (<http://nfc.forest.ca>), held in Ottawa, May 1-2, 2003, the new NFS commits to "Develop legislation and policies to improve the sustainability (social, environmental and economic) of forest-based communities by: a) fostering participation and involvement in forest management decision making." Action item 2.1 furthers this objective by working towards community participation in the implementation of forest management decisions in addition to participation in the planning process itself.

XII World Forestry Congress

The XII World Forestry Congress was hosted by Canada in Québec City on 21-28 September 2003 and was a unique honor to promote the involvement of the world's forest community in the ongoing development of international forest policy. Staged under the aegis of the FAO, this was the first time that a World Forestry Congress was held in Canada. This event, which by all accounts has been an immense success, attracted 4900 participants from 137 countries spanning five continents. All forest stakeholders were represented at the Congress including government representatives, industry leaders, forest practitioners, wood-lot owners, environmentalists, indigenous peoples, and internationally renowned academics. The Congress included a substantial contingent of youth from Canada and abroad as well as delegates from developing countries. Some 20 federal departments and agencies made a tangible contribution to the success of the Congress.

Implementation of the IPF/IFF proposals for action related to thematic issues of UNFF 4

Please provide information on: activities undertaken since 1997, progress made, constraints encountered, lessons learned, and issues that have emerged, as well as relevant information related to means of implementation (financing, transfer of environmentally sound technologies, and capacity-building) to support the following actions:

Social and Cultural Aspects of Forests

- Promoting the fair and equitable sharing of the benefits arising from the utilization of forest genetic resources and addressing the issue of intellectual property rights, including the identification of the origins of forest genetic resources, taking into**

account work undertaken by the Convention on Biological Diversity and other international agreements

Canada has established a national focal point on access and benefit sharing (ABS) within the Biodiversity Convention Office of Environment Canada (BCO). Canada has worked closely with National Aboriginal Organizations to develop Canadian CBD-related positions on an international ABS. The BCO has participated at Non-Timber Forest Products Conferences e.g. the Boreal Forest Summit, in order to foster an awareness of ABS and intellectual property issues. Canada is in the initial stages of developing a national ABS policy. In September 2003, a Federal/Provincial/Territorial/Aboriginal Workshop on ABS was held.

3. Strengthening the role of women in sustainable forest management, including through capacity building and greater participation in community-based forest management

The role of women in the forestry sector in Canada has changed dramatically over the past 15 years leading into the new millennium. There has been a shift from the more traditional subordinate supporting role to one of women moving into management and decision-making positions. This is a conclusion from a 2001 study that examined the contribution of women in defining the Canadian forestry agenda. Women interviewed for the study worked in senior positions in varying jurisdictions — government, industry, academia, and as consultants. Their perspectives on how the journey to the top was progressing, the challenges they faced, and the factors affecting this journey were the focus of this study.

National statistics show that women continue to be under-represented in the field of forestry as university students, in academia, in operations, and in all facets of the forest sector. Of those employed in the forest sector 16 percent are women, well below the overall average of 45 percent for all occupations. The study highlights formal and continuing education as well as the influence of a mentor as being important to the advancement of women in the forest sector. Eighty-five percent of the interviewees had an undergraduate degree, 55 percent had a Masters degree, and 26 percent had earned a Doctorate. Fully 100 percent had taken continuing education training, most frequently in communication, leadership and human resource management.

The study also found that over 75 percent of those surveyed encountered barriers to success along the way relating to gender, age, pay inequity and factors related to balancing career and family. As well, some 39 percent of respondents felt they were not being treated equitably on the pay scale. This was particularly true in academia and industry.

The women interviewed in the study are optimistic that the path to career advancement is clearer now than ever before, made easier by those who have gone before them coupled with improvements in public attitudes on traditional employment. Most agreed that having both men and women work together, equally valued for their contributions, is the best approach to tackling some of the remaining challenges.

A complete copy of the study, prepared for the joint FAO/ECE/ILO Committee on Forest Technology, Management and Training held in Portugal in April 2001, was published in The Forestry Chronicle Vol 77(5): 846-853.

More generally, CFS has done considerable research on the sociology of single-industry communities. Similarly, the economic and environmental importance of multi-functional family forestry in Canada and elsewhere is fairly well known. The contribution of family forestry to the social health and sustainability of rural communities in Canada has received much less attention. It is important that the distinct contribution of family forestry be better understood, and that a method be established for measuring that contribution.

The social impact of family forests was the subject of a presentation to the Fourth International Private Forests Conference at the World Forest Congress hosted by Canada in September 2003. It was proposed at the conference that the International Family Forestry Alliance establish a Working Group on the topic. As a follow-up to the discussion, a paper is being prepared in co-operation with Dr. Tom Beckley (University of New Brunswick) and Solange Nadeau (CFS) for the IUFRO Symposium on the Human Dimensions of Small Scale Forestry in late March '04.

From an international development perspective, Canada recognizes that women head a growing number of households in many countries. Adding to their roles as farmer and homemaker, women make up a growing proportion of the paid labour force serving the forest industry and informal sector enterprises (e.g., crafts, extracting fibre, making charcoal). To realize their full potential as agents of development, women need some control over the natural resources they use. In order to give gender issues the necessary attention, Canada's international development projects feature a comprehensive gender strategy that are monitored and evaluated.

4. Integrating local and indigenous communities in sustainable forest management programmes, particularly as regards (a) recognition and respect of the customary and traditional rights and privileges of indigenous and local communities, (b) participation in decision making regarding the management of forests, (c) the attainment of secure land tenure arrangements, (d) capacity building and technology transfer for sustainable forest management directed at indigenous and local communities

Aboriginal peoples' relationship with the forest has spanned thousands of years in Canada. It has shaped their identity, culture and spiritual beliefs, and has generated a large body of traditional forest knowledge. Today, that relationship remains strong. Approximately 80 percent of Canada's Aboriginal communities are located in forested areas with reserves encompassing approximately 1.4 million hectares of forested land.

The Constitution Act, 1982, s. 35 recognizes and affirms existing Aboriginal and treaty rights, and defines Aboriginal peoples of Canada as including "the Indian, Inuit and Métis peoples". Over the last 25 years, Canadian courts have upheld and interpreted Aboriginal and treaty rights. Recent jurisprudence has required governments and third parties to negotiate and consult with Aboriginal peoples concerning the development and exploitation of forest lands, especially where there are conflicting rights and legislation. Consequently, forest policy and forest

management practices are constantly evolving to reflect court decisions. Also, policies that promote sustainable forest management have provided an opportunity to incorporate Aboriginal and treaty rights into forest management plans. In particular, much progress has been made in improving the forest management community's understanding of Aboriginal and treaty rights as well as Aboriginal views of the world. Using the language of the Convention on Biodiversity, Canadian jurisprudence and forest policies and programs have made significant progress in facilitating "the participation of indigenous and local communities and all stakeholders" in sustainable forest policy and management.

Aboriginal participation in the forest sector is increasing. Canada's Aboriginal peoples are gaining control over a growing land area through land claim settlements, Treaty-making and Treaty Land Entitlement processes. Meanwhile, Canadian courts continue to provide guidance in determining the First Nations' legal interests in relation to natural resources. In British Columbia (B.C.), for example, the Treaty Negotiation Office is working to help resolve aboriginal claims in B.C. by negotiating and implementing treaties and other agreements with First Nations. In doing so, legal certainty of the ownership and use of Crown forestlands and resources claims is established.

There is also progress in involving Aboriginal peoples in forest management and decision-making, consistent with Aboriginal and Treaty rights. This includes progress in identifying how traditional knowledge can make a valuable contribution to forest management in the future. One of the most important related developments is the British Columbia Court of Appeal decision that both government and industry have a legal obligation to consult with First Nations and Aboriginal peoples on forestry matters even before Aboriginal and Treaty rights are defined.

Notwithstanding the increased Aboriginal participation in the forest sector, many Aboriginal communities hold the view that provincial/territorial tenure arrangements do not sufficiently enable local and Aboriginal community members to have access to Crown owned forests and thus receive a more equitable share of forest benefits. Some provinces and territories are exploring the reallocation of tenure. The newest NFS recognizes the imperative to expand community-based tenures. Action item 2.2, proposes: "Expand the area and use of community-based tenure systems and resource allocation models in remote, rural regions of Canada to increase benefits to Aboriginal Peoples and forest-based communities".

The National Forest Strategy continues to reflect the desire of Aboriginal peoples to actively participate in and benefit from forest-related policy and decision-making processes. Canada's most recent strategy, National Forest Strategy (2003-2008) – A Sustainable Forest: The Canadian Commitment, continues to identify Aboriginal issues as a priority. The third of its eight strategic themes is entitled "Rights and Participation of Aboriginal Peoples" and includes the following seven action items:

- Initiate processes with Aboriginal Peoples and appropriate levels of government for establishing:
 - A shared and grounded understanding of Aboriginal rights, Aboriginal title and treaty rights;

- The roles and responsibilities of Aboriginal Peoples, governments and forest stakeholders; and,
 - Measures to fulfill governmental fiduciary responsibilities and the legal duty to consult;
- Implement institutional arrangements between Aboriginal Peoples and governments that reflect a spirit of sharing responsibilities and benefits for the management, conservation and sustainable use of forest lands and resources; and give effect to land claim settlements, treaties and formal agreements on forest resource use and management;
 - Incorporate traditional knowledge in managing forestlands and resources in accordance with the Convention on Biological Diversity.
 - Direct federal and other available funding to support Aboriginal capacity building and participation in implementing the National Forest Strategy, through measures such as a renewed and expanded First Nation Forestry Program and the development of a parallel Métis forestry program, and in supporting Aboriginal participation in related local, regional and international meetings.
 - Provide for access to a fair share of benefits from the use of forestlands and resources.
 - Provide for Aboriginal interests in the development of international trade agreements; and,
 - Review and update the status of forest inventories and management plans of Indian Reserve forest areas and identify resources to implement these plans.

At the provincial and territorial level, various approaches are used to facilitate Aboriginal involvement in forest policy development ranging from consultations to direct participation in developing policies, programs and plans. Recent examples of progress in this area are found with the Innu Nation in Labrador and the Cree-Québec Agreement. The Innu Nation and the government of Newfoundland and Labrador partnered in developing an ecosystem-based forest management plan covering 7 million hectares. The plan has been inclusive and innovative throughout its development and is expected to be so throughout implementation. The Cree-Québec Agreement provides for more participation by the Cree communities in planning and management of development activities. This agreement has led to the creation of a Cree-Québec Forestry Board, which will take an active role in forest management and decision-making. Working groups within Cree communities will oversee the implementation of forest management plans and forestry programs. In Ontario, an advisory body, known as the Anishinabek Ontario Resource Management Council, provides recommendations on how to manage natural resources affecting Anishinabek First Nations.

In Canada, there are a number of processes to discuss legislation and policies in relation to Aboriginal and Treaty rights. Due to the complexity of the issues, these processes are proving to be lengthy. To facilitate, many provincial and territorial governments have established training

and policy frameworks to guide forest operations and tenure arrangements so that Aboriginal and Treaty rights are not infringed upon without justification. In a similar manner, most governments provide information in a variety of forms and employ associated support staff to improve the forest community's understanding of Aboriginal and Treaty rights. Many have created ways for direct interaction between Aboriginals and non-Aboriginal workers in the forest sector.

Aboriginal access to forest resources has generally increased throughout Canada. In some provinces Aboriginal participation in the forest sector has increased significantly. In 2001, almost 10 percent of the experienced Aboriginal labour force in Canada was in the logging and forestry sector, compared to less than one percent of the non-Aboriginal experienced labour force. Substantial efforts have been made to improve Aboriginal employment and business opportunities in the forest sector. Many provinces and territories have implemented policies and programs to promote Aboriginal involvement in the forest sector.

For example, in 2003, Manitoba created a Sustainable Forestry Unit (SFU) to develop capacity for the forest sector with priority attention to: increasing value-added processing in the forest sector (including timber and non-timber forest products); encouraging Aboriginal forestry developments, including (a) resource co-management, (b) business ownership and (c) economic development (training, employment, etc.); and fostering interaction between primary and secondary industry. In British Columbia (B.C.), the First Nation Forest Strategy contains mechanisms to share forest revenues and increase access to timber for First Nations. In addition, the B.C. government granted the Minister of Forests the right to directly invite First Nations tender applications without competition. The B.C. government has also committed to reallocate up to 8 percent of the existing tenure, about 5 million cubic metres to First Nations in the province. In New Brunswick, the government has signed harvesting agreements with each of the province's 15 First Nations, allocating a total of 5.3 percent of the annual allowable cut of Crown timber. These agreements represent \$13 million per year in wood and royalties to First Nation communities and provide employment and economic opportunities.

Most provinces have strategies to promote Aboriginal employment through activities such as direct hiring, integration with Aboriginal employment agencies, and links with training institutions. Some forest companies and Model Forests have also facilitated employment through training and workshops. In B.C., the government has been engaged in a number of activities related to the First Nations interests with respect to Crown land and resource allocation and use. These activities have led to over 90 protocols and other agreements with First Nations on economic development, land-use and resource management planning, data exchange and other matters that encouraged investment and assist rural community development in 2002/03. Moreover, the province's work on the Central Coast Strategy provides greater economic opportunities for First Nations and resource-based opportunities through ecosystem-based management for forestry and other resources. Although not specifically dedicated to the forest sector, a recent initiative entitled Building Environmental Aboriginal Human Resources (BEARH) has resulted in a strategy to employ 6,000 Aboriginal people in the Canadian environmental sector, including forests, over the next 15 years (www.beahr.com/den.asp).

Innovative private sector, joint venture and cooperative business arrangements are also contributing to increase Aboriginal involvement in Canada's forest sector. Nabakatuk Forest Products Inc. was created in 1997 and is located near the community of Waswanipi in eastern Quebec. The Nabakatuk mill supports more than 100 direct jobs and is contributing to the area's prosperity in various ways including enhanced services, housing, municipal administration. In British Columbia, Lignum Ltd. implemented five joint venture business partnerships with local First Nations, supports five First Nations liaison workers and sponsor two First Nations students in post-secondary forestry training. The Wapawekka Lumber Ltd. in Saskatchewan began production in 1999. In 2003, the company exceeded its designed throughput capacity and employments stood at 63 persons of whom over 60% are Aboriginal persons. Weyerhaeuser Canada and the Woodland Cree First Nations own the mill.

In 1996 the federal government launched the First Nations Forestry Program (FNFP) to assist First Nations to manage their forest resources and position them to participate in local and regional forest economic development opportunities. Since then, FNFP projects in over 370 communities have had a significant impact on enhancing First Nations' capacity and on-the-job training in forestry-related activities such as training, forest management planning, traditional land use studies, forestry harvesting practices, silviculture, business development and joint venture partnerships. The FNFP is delivered in partnership with First Nations and has support from First Nations, the forest industry and provincial governments. Since the program's inception, \$32 million of investment from the federal government has levered an additional \$73 million from First Nations and their partners in over 1200 projects.

Canada has undertaken a number of technology transfer/intellectual property/traditional knowledge capacity-building activities related to indigenous and local communities. In 1999, Indian and Northern Affairs Canada and Industry Canada co-published "Intellectual Property and Aboriginal People: A Working Paper." The Biodiversity Convention Office, Environment Canada has undertaken a number of capacity-building activities through its participation in meetings with the National Aboriginal Organizations, regional organizations (e.g. Grand Council of the Cree, Saskatchewan Federation of Indian Nations, Yukon First Nations, Nishga'a) and various conferences and workshops.

In May 2000, the Commissioner of the Environment and Sustainable Development, Office of the Auditor General of Canada, cited the FNFP as an example of successful interdepartmental cooperation and effective program delivery. In June 2000, the FNFP received the Government of Canada's Public Service Award of Excellence. More information on the FNFP can be found at <http://www.fnfp.gc.ca/>.

In addition to the FNFP, Canada has launched a pilot project designed to increase the forestry involvement of other Aboriginal people. In 2000-2001, the federal government supported a number of Métis forest projects, including a joint venture between five Métis communities and a wood business in Saskatchewan, an outfitters demonstration project in Quebec, and training programs for youth and sawmill workers in Saskatchewan.

Aboriginal people are managing partners in a number of Canada's model forests, and lead the management of the Waswanipi Cree Model Forest in Quebec's James Bay area. Together with

the forest industry, government and other groups involved in the model forest, the Crees are working on new forest management methods that combine current practices with traditional Cree knowledge. They are also creating a certification program to recognize those who respect the Cree system of land management. Recently the model forest partners began a consultation project to explore ways of enhancing Cree participation in forest management planning.

Canada's Aboriginal people are also starting up innovative businesses that go beyond mainstream forest activities including development of eco-tourism, heritage parks, and cultural villages. Other projects are focusing on non-timber forest products and benefits. The "ethno-botany" project in interior British Columbia has been studying the Ktunaxa and Kinbasket communities' traditional use of native plants for medicinal and other cultural purposes. One of the federal government's Métis and off-reserve projects, conducted with the Ontario Native Women's Association, studied the market for non-timber forest products.

At the international level, Canada's Aboriginal community is actively engaged in processes international forest policy deliberations. For example Canada's Aboriginal communities and organizations played a key role in the Indigenous Peoples' Forest Forum (IPFF) held in connection with the XII World Forestry Congress hosted by Canada in September 2003. The IPFF took place 19-21 September 2003 and brought together more than 300 representatives of the world's indigenous community to exchange views and experiences on a comprehensive agenda. The key output from the Forum was the Wendake Action Plan (www.nafaforestry.org/wendake.php). This document builds on past indigenous declarations and takes into account international, instruments, agreements, processes and initiatives. The Wendake Action Plan contains five key action items aimed at addressing Indigenous Peoples' interests.

More information pertaining Canadian Aboriginal forest-related issues and initiatives can be found online at www.nafaforestry.org.

Traditional Forest-related Knowledge

- 5. Inventorying, cataloguing, and applying traditional forest related knowledge for sustainable forest management and promoting research on TFRK with the involvement of the knowledge holders**

Traditional forest related knowledge

Action: Advanced use of TFRK for SFM

Domestic Context

In 2002, an evaluation of Canada's National Forest Strategy (<http://nfsc.forest.ca/background/2002final.html>) stated that in Canada traditional knowledge activities have focussed largely on research. It further remarked that there is broad agreement amongst Canadians that traditional knowledge can be a valuable source of information to improve forest management. To pursue this goal, the federal and several provincial/territorial

governments, and some companies, have been working to develop guidelines for how to consider traditional knowledge in forest research, management practices, planning and training.

For example, working with the province of Saskatchewan, Mistik Management is responsible for managing a 2 million ha Forest Management Area in northwest Saskatchewan. The 20-year forest management plan incorporates traditional knowledge and is driven by integrated resource management principles. Another example is the policy developed by the government of the Northwest Territories that recognizes that the aboriginal peoples of the Northwest Territories have acquired a vast store of traditional knowledge through their experience of centuries of living in close harmony with the land. The policy recognizes that aboriginal traditional knowledge is a valid and essential source of information about the natural environment and its resources, the use of natural resources, and the relationship of people to the land and to each other, and will incorporate traditional knowledge into Government decisions and actions where appropriate. In B.C., the government has provided funds to support the collection of traditional use information in First Nation traditional territories. The province maintains a database that contains more than 200 Traditional Use Studies and Cultural Overview Assessments conducted in B.C. over the past ten years. This information is used by the province and industry to facilitate land use planning consultations with First Nations, and assist First Nations participating in the treaty process. The Government of Alberta has recently published a “Best Practices Handbook for Traditional Use Studies” developed in cooperation with Aboriginal Peoples which considers a range of community-based mapping and storage of traditional knowledge issues. In Ontario, forest management plans must take account of Native Background Information reports. These reports contain information on issues such as: the past use of timber and other resources including traditional and commercial hunting, fishing, trapping and gathering; significant areas for traditional and recreational activities; Aboriginal communities; and sites with local archaeological, historical, religious and cultural significance to Aboriginal communities.

In 1998, the Secretariat of the Convention on Biological Diversity called for case studies on the implementation of Article 8(j) of the Convention. In response, the CFS took up the challenge of documenting traditional ecological knowledge activities supported by the First National Forestry Program. The results of this review were released in 1999 in a report entitled “Traditional Ecological Knowledge within the Government of Canada’s First Nation Forestry Program – A Case Study” (see http://www.fnfp.gc.ca/publications/55_Traditional_Ecological_Knowledge.htm). The case study provides information on a diverse array of projects pertaining to traditional knowledge ranging from the protection of the cultural and ecological integrity of forests to traditional land use studies, and from the development of forest harvest strategies that reflect the extent and nature of traditional land use to the development of Aboriginal Heritage Gardens. These and other examples form the foundation for the Case Studies conclusion that “Canada’s First Nation peoples are rediscovering their history of traditional ecological knowledge. They are finding ways to recapture this knowledge, enabling the current generation to understand it and ensuring that it is passed on to future generations for their use and benefit. At the same time, non-Aboriginal Canadians from coast to coast are also interested in traditional ecological knowledge as practised for centuries by the country’s first peoples.”

In 2001, in the context of the World Summit on Sustainable Development, Canada sponsored the development of 16 Aboriginal Peoples case studies related to traditional knowledge. These case studies are available at www.thecentrefortraditionalknowledge.org. Notable among these reports are “Aboriginal Participation in Sustainable Forest Management in Canada” and “Select Cutting as an Alternative to Clear-cutting: An Aboriginal Perspective”.

Recently, the federal government incorporated the consideration of traditional knowledge into its endangered species legislation. The Species at Risk Act (SARA) is a major step towards protecting species at risk and their habitats in Canada. The Act is designed as a key tool for the conservation and protection of Canada's biological diversity and fulfills a key commitment under the United Nations Convention on Biological Diversity. The Act reflects Canadian views that Aboriginal peoples have been closely connected to the land, hunting, fishing and harvesting plants to live. SARA recognizes the knowledge and experience of Aboriginal peoples and requires consideration of Aboriginal traditional knowledge when the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses a species, and cooperation and consultations with Aboriginal peoples that will be affected by a recovery strategy, action plan, or management plan or critical habitat protection measures. Specifically, the process set out in SARA to add a species to the List of Wildlife Species at Risk or change its status on the List requires, inter alia, that COSEWIC assess the biological status of a species using the best available information on the biological status of the species, including community and Aboriginal traditional knowledge.

Partnerships in Canada are forming to further the integration of mapping technologies and traditional knowledge. One such example is the Aboriginal Mapping Network (AMN). The AMN is the result of leadership in Canada's First Nations and Ecotrust Canada. The AMN provides an opportunity to exchange information and experience among First Nation mapmakers who are looking for answers to common questions regarding mapping, information management and GIS. In 1999 the AMN hosted a workshop on Moving Traditional Use Study Information Into a GIS: Challenges and Methods. Information on the AMN's bioregional and conservation mapping is available at <http://www.nativemaps.org/publications.html>.

Canadian forest scientists have contributed to the use of artificial intelligence/advanced knowledge management techniques to integrate traditional knowledge into forest management. Leading this endeavour is research conducted at the CFS Pacific Forestry Centre. More information is available on this subject at www.pfc.forestry.ca/programs/tek/index_e.

Other Sources of Domestic Information

Information of a variety of traditional knowledge topics is available for Canada's Centre for Traditional Knowledge (www.thecentrefortraditionalknowledge.org). Established in 1993, the Centre is an independent, non-profit, charitable foundation working in partnership with the Canadian Museum of Nature. Its goal to advance worldwide recognition, understanding and use of traditional ecological knowledge in sustainable development policies and decision-making.

More information on issues related to Canada's Aboriginal peoples is available from the Aboriginal Canada Portal

(<http://www.aboriginalcanada.gc.ca/abdt/interface/interface2.nsf/engdocBasic/0.html>). This site is a single window to Canadian Aboriginal on-line resources, contacts, information, and government programs and services. The portal offers ease of access and navigation to listings of Aboriginal associations, businesses, organizations, bands, communities, groups, news and peoples. The portal provides information and links to the following sites in an organized manner: National Aboriginal Organizations, 12 Federal Government departments with Aboriginal mandates, all Provincial Governments and organizations with Aboriginal responsibilities, as well as all related Aboriginal community information.

A bibliography of Canadian references on traditional ecological knowledge is available at <http://www.ecoknow.ca/bibliography.html>. This reference list is an output of “Forests and Oceans for the Future”, an ecological knowledge research project housed at the University of British Columbia intended to help incorporate core community values and knowledge (aboriginal and non-aboriginal) in local sustainable forest and natural resource management.

International Context

Traditional knowledge is a theme to be considered in the context of both Canada’s domestic and foreign policies, including international aid policy in that it promotes understanding of issues such as gender, human rights, governance, environment and natural resources management. Canada’s experience arising from its bilateral support to developing countries has enabled the development of policies and programs pertaining to traditional knowledge and indigenous peoples that are being integrated into international, multilateral and regional discussions, and are becoming a central element of many of Canada’s international poverty reduction and sustainable development approaches. The following are some recent Canada’s International Development Agency (CIDA) activities pertaining to traditional knowledge and indigenous peoples:

Indigenous Issues Secretariat

The initial stage of an Indigenous Issues Secretariat has been established within CIDA. Objectives include coordination of indigenous development activities; coordination of the CIDA Indigenous Issues Network (INNET) and the INNET Extranet; research, analysis and information dissemination on Indigenous development issues; liaison with other government departments, donors and civil society on these issues; provision of policy support to development programs; and design and implementation of the Indigenous Peoples Partnership Programme (IPPP).

Indigenous Peoples Partnership Programme (IPPP)

Development of the IPPP is a multiyear \$10 million initiative announced at the Indigenous Peoples Summit of the Americas in March 2001, and designed in close consultation with Aboriginal Canadians and Indigenous people throughout the Americas. The IPPP will support partnerships between Aboriginal Canadian entities and their Indigenous counterparts in Latin

America and the Caribbean in the areas of sustainable development capacity transfer; research in areas identified by Indigenous peoples as important to their development; and youth leadership. More information on the IPPP is available at <http://www.acdi-cida.gc.ca/ippp>.

Indigenous Issues Extranet Site (INNET)

This secure, moderated, password-protected extranet site allows members to post documents, share event information, pose questions and communicate with CIDA staff, individuals and community groups around the world on a wide range of indigenous issues.

Integrating Indigenous Knowledge in Project Planning and Implementation

This publication, developed by Canada in partnership with the World Bank, International Labour Organization and KIVU Nature Inc was first produced in 2000. The book is available on CIDA's website (www.acdi-cida.gc.ca/cida_ind.nsf/9c9c207b0db5a8c68525651c005db5a5/57ed1d990f2ac9be85256b21004b12de?OpenDocument). Many international organizations have used and or adapted this operational tool for application of traditional knowledge into project development.

Development Express

CIDA's "Development Express" is a tool contributing to the Agency's knowledge-based and continuous learning objectives. Two editions in particular address Indigenous issues: Indigenous Knowledge and Sustainable Development, and First Nations and Development, a soon to be published textbook on Indigenous Peoples.

Directory of Aboriginal Exporters

CIDA, as a member of the Aboriginal International Business Development Committee (AIBD), assisted in the production of the Directory of Aboriginal Exporters, Second addition. Developed in partnership with Aboriginal organizations across Canada, the Directory will be expanded annually to profile the capacity of Aboriginal Canadians to engage in international trade and official development assistance efforts around the world.

6. Supporting the application of intellectual property rights and/or other protection regimes for traditional forest related knowledge, and the fair and equitable sharing of benefits arising from the use of traditional forest related knowledge, innovations and practices

In 1998, Canada organized and hosted the World Intellectual Property Organization's (WIPO) Fact-Finding Mission (FFM) on Intellectual Property and Traditional Knowledge. The WIPO FFM consisted of a number of roundtable discussions and visits to cultural centres and museums in 6 Canadian cities in November 1998: Vancouver, Calgary, Saskatoon, Ottawa, Iqaluit and Montreal. A summary of the IP needs and expectations can be found in the chapter on the FFM to North America in "Intellectual property Needs and Expectations of Traditional Knowledge Holders - WIPO Report of the Fact-Finding Missions on Intellectual Property and Traditional

Knowledge (1998-1999).” Since the inception of the WIPO Inter-governmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. Canada has funded the participation of representatives from several National and Regional Aboriginal Organizations from Canada at the IGC meetings. In September 2003, Canada hosted a WIPO North American regional workshop on Intellectual property and Traditional Knowledge. The federal government funded the participation of representatives of the First Nations, Inuit and Metis at this workshop.

Scientific Forest-related Knowledge

7. Disseminating scientific knowledge to all interested parties, including through new and innovative ways, and strengthening capacity and mobilizing funding for national and regional research institutions and networks

Commensurate with its commitment to sustainable forest management, Canada recognizes the need to disseminating scientific and other information to all interested parties. Within Canada, there is a rich array of mechanisms being used in share information and research results with Canadians. Federal, provincial and territorial authorities place a high priority on communicating all types of findings and results to the public, reflecting the belief that effective public participation requires current information. The means used include: articles in scientific and other specialized publications; technical reports and monographs; working papers; newsletters and the Internet. The private sector and non-governmental organisations also rely on these sorts of approaches.

There are a number of ways in which this is done in Canada. Examples include:

- Canada’s *State of the Forests* Report, tabled annually before the Parliament of Canada; (<http://www.nrcan.gc.ca/cfs/proj/ppiab/sof/common/latestx.shtml>)
- Periodic reporting on C&I, the latest of which being Canada’s *National Status 2000*, as well as our national contribution to the Montreal Process; (http://www.nrcan.gc.ca/cfs/proj/ppiab/ci/2000_f.html)
- Science and Technology activities undertaken by federal, provincial and territorial governments and members of the Canadian forest community; (http://www.nrcan-nrcan.gc.ca/cfs-scf/science/resrch/landscape_e.html)
- A study of landscape changes at six of Canada’s Biosphere Reserves involved local stakeholders, ranging from youth to governments in an assessment of impacts on biodiversity and on management options. The report is found at http://eqb-dqe.cciw.ca/eman/reports/publications/2001_cbra_acrb/brochure.pdf
- One of the most challenging issues of our time is to balance the need to sustain forests for present and future generations with the global, national, and local needs of an expanding world population. “Solutions” is a newsletter reporting on actions taken to integrate policy

priorities and forest science to meet these challenges. The newsletter is found at http://www.nrcan.gc.ca/cfs-scf/national/what-quoi/Solutions/index_e.php

- “Canada's Forest Network” (CFN) is an internet guide to help Canadians and those abroad have access to Canadian forest and forestry-related resources. The CFN is a valuable source on information on Canadian forest products, services, organisations, events, issues, statistics and scientific publications. The site also contains links to federal and provincial/territorial government internet addresses. The CFN can be found at <http://www.forest.ca/>
- Established in December 1995, the Sustainable Forest Management Network (SFM Network) is a research network of Canada's Centres of Excellence. The SFM Network internet site is a comprehensive source of information on research projects as well as conferences and workshop proceedings. The SFM Network can be found at <http://sfm-1.biology.ualberta.ca/english/home/>

The Forest Ecosystem Research Network of Sites (FERNS) is a network of sites managed by agencies and local autonomous partners nationwide focused on the study of sustainable forest management practices and ecosystem processes at the stand level. This network promotes this research nationally and internationally, improves linkages among sites, preserves the long-term research investments already made on these sites and provides a forum for information exchange and data sharing. The FERNS web site is accessible through the Canadian Forest Service, Pacific Forestry Centre home page at <http://www.pfc.cfs.nrcan.gc.ca> and includes information on individual FERNS sites, as well as linkages to collaborators.

Information is also disseminated through the efforts of a wide array of non-governmental organizations. One such body is Global Forest Watch Canada, an initiative of the World Resources Institute (<http://www.globalforestwatch.org/english/canada/index.htm>). Recognizing the potential to enhance the collection and dissemination of forest information through public-private sector partnership, in September 2003 the CFS, the Forest Products Association of Canada, the World Resources Institute agreed to cooperate to improve the availability of information on Canada's forests to improve the public's understanding of forest landscapes. The Canadian Environment Network (CEN) is another important source of information (<http://www.cen-rce.org/eng/index.html>). The CEN keeps its members up to date with important developments by, inter alia, sharing information among environmental non-governmental organizations through discussion documents. The CEN's Forest Caucus is a network that distributes forest information and provides tools to increase knowledge and promote the conservation of Canadian forests.

Canada's forest industry is also active in the distribution of information on Canada's forests. For example, the Forest Products Association of Canada (FPAC) has released a number of studies pertaining to the contributions of the private sector to the sustainability of Canada's forests. FPAC's publications are available at <http://www.fpac.ca/english/index.htm>.

At the federal level, the CFS plays a leading role in improving understanding, stimulating dialogue, building consensus, and influencing policies and decision-making with respect to Canada's forest resources. It considers the forest sector broadly as the forest interests of

Aboriginal peoples, the industry, communities and many diverse interested parties. As a federal agency, it also reflects the interests of Parliamentarians and taxpayers.

The CFS facilitates the marketing of science and the transfer of knowledge and technology to Canadian. A good example of this work is “Science in the Centres” where CFS and other Natural Resources Canada (NRCan) sectors provided expertise and content for a variety of appealing, interactive features and programs to reach visitors the Science North Centre in northern Ontario. With a mission to bring NRCan science to the people of Canada and especially to this country's youth, NRCan has partnered with other science centres besides Science North, including Canada’s Museum of Science and Technology in Ottawa, and Science World in Vancouver. Collectively, these centres play host to close to a million visitors a year. The partnership is expanding to include more of the 29 member institutions of the Canadian Association of Science Centres, including Exploration Place in Prince George, B.C., the Odyssey in Edmonton, Alberta, and the Ontario Science Centre in Toronto.

More than 65% of Canada’s forest products research and development (R&D) capacity is housed within three world-class research institutes, which are unique partnerships of governments and industry and an important source of information Canada’s forest management technologies and forest products:

- **Forintek Canada Corp.** (Forintek): conducts research on solid wood products such as parallel laminated beams and oriented strand board (<http://www.forintek.ca/>);
- **The Forest Engineering Research Institute of Canada** (FERIC): conducts research on timber extraction and forest management technologies such as improved cutting and site treatment for replanting (<http://www.feric.ca/>); and,
- **The Pulp and Paper Research Institute of Canada** (Paprican): conducts research on paper and related products, including their production and reducing the environmental impacts of the pulp and paper industry (<http://www.paprican.ca/>).

8. Enhancing interaction between scientific research and policy processes, including priority setting of research, addressing of knowledge gaps and using scientific knowledge to support decision-making

Nationally, a number of mechanisms exist in Canada to address issues of prioritization of forest research.

The Canadian Council of Forest Ministers (CCFM) Science & Technology Working Group provides an opportunity to:

- Discuss forestry S&T priorities in relation to major policy, trade, economic environmental and social issues;
- Address major issues related to future forestry S&T needs such as direction, partnership and funding;

- Reviewing S&T data as a component of strategic agendas such as national forest strategies;
- Develop S&T recommendations for the CCFM and CCFM Deputy Ministers on forestry issues, and priorities and opportunities in the forest sector;
- Identify new S&T opportunities for cooperation and coordination.

The National Advisory Board on Forest Research (NABFOR) advises the Minister of Natural Resources Canada (NRCan) on the science and technology (S&T) issues of importance to the forest sector. It provides broad-based advice on the status, needs, opportunities and priorities of forest research and S&T issues in Canada; and, related international S&T issues that are of interest to Canada. NABFOR's membership includes representation from governments, industry, academia, as well as from environmental Indigenous and local communities. More information can be found at

http://www.nrcan.gc.ca/cfs-scf/science/policoord/nabfor/nabfor_e.html#03

Recently, there have been a number of fora and workshops dealing with maximizing the Canadian forest science and technology (S&T) community's contribution to the forest sector. An outcome of these initiatives is a mechanism to address the many complex, cross-jurisdictional issues within the forest sector and the creation of a new entity, the Canadian Forest Innovation Council (CFIC), needed to develop a focussed view of innovation in the sector. This high level strategic organization has the aim of marshalling the capacity and resources needed to revitalize the sector and to promote and ensure innovation. The mandate of CFIC is to ensure the innovative capacity of the Canadian forest sector is maximized in a way that promotes industry profitability, environmental quality and community sustainability. Membership in the core group of CFIC includes governments (federal and provincial) and industry.

Prior to the development of CFIC, the Forest Coalition for the Advancement of Science and Technology (FORCAST), a private sector, non-profit organization, fulfilled the role of championing the importance of adequately resources science and technology (S&T) in the Canadian forest sector. FORCAST facilitated coordination and communication among forest S&T providers and users, and promoted the alignment of forest S&T with national, provincial and local priorities and objectives.

CFS, in partnership with other government organizations, industry and universities, co-hosted a one-day boreal forest workshop at the XII World Forestry Congress. The intent of the workshop was to describe existing research priorities and partnerships in a number of boreal forest countries around the world and explore the possibilities for international partnerships in boreal forest research. International speakers provided overviews and a summary of research priorities in countries such as Russia, Finland and the USA. The workshop concluded with a panel discussion that reviewed existing partnerships and activities and developed suggestions for potential follow up in several areas. The workshop also served as a follow up to a National boreal workshop, held a few months before, to identify research priorities, highlight existing research partnerships in place across the country, and promote new ones

http://www.nrcan.gc.ca/cfs-scf/national/what-quoi/Solutions/index_e.php?ArticleId=173&IssueId=9

Model forests are an example where people, science and policy can come together to build consensus on forest management approaches. Initiated in Canada in 1992, the national network consists of 11 model forests sites. A model forest is a science-based partnership program of groups and individuals representing diverse forest values working together to develop and demonstrate approaches to sustainable forest management that are locally acceptable and nationally relevant. Information of Canada's model forests is available at http://www.nrcan.gc.ca/cfs-scf/national/what-quoi/modelforest_e.html

The First Nations Forestry Program (FNFP) is a federal program, managed in partnership with First Nations. Management Committees, in each province and territory, ensure successful program management and implementation through dedicated people from First Nations and the Government of Canada working together in partnership. In many instances these structures include people from the forest industry and provincial-territorial governments. Typically, the program funds encourage additional contributions toward projects by partners, such as the forest industry, the provincial governments, environmental non-government organizations and others. The program has been a model where First Nations are able to develop economic opportunities, while maintaining traditional and cultural uses of forestlands. Information of Canada's FNFP can be obtained at <http://www.fnfp.gc.ca/>

Canada's provinces and territories also have mechanisms to integrate science and policy and to prioritize forest research. The British Columbia Ministry of Forests is involved in a wide range of research related activities to ensure stewardship. B.C.'s Forest Sciences Program provides provincial staff with access to in-house scientific expertise, timely advice, and applied research capability to address current forest resource management issues, anticipate future problems, and assure long-term stewardship and sustainability. Numerous forest scientists confront operational problems to support policy developers, statutory decision-makers, and field operations personnel. The Research Program of the Forestry Innovation Investment program, funded through the B.C. Ministry of Forests, has been making investments since 2002 that provide a positive contribution to the government's goal of having a leading edge forest industry that is globally recognized for its productivity, environmental stewardship and sustainable forest management practices. Since 2002 the program has been budgeted \$32 million to in support of research activities.

In Ontario, the government is continuing to take broad action to coordinate, integrate, prioritize and optimize science investments including regarding the work of institutions such as the: Sustainable Forest Management Network; Canadian Forest Innovation Council; Paprican; FERRIC; FORINTEK; and the Ontario Forest Research Institute. Moreover the province conducts scientific studies to monitor and guide the effectiveness of Ontario forest management practices, policies and guidelines.

At the local level, Canada's forest community is also engaged in multi-sector programs influencing policy development, e.g. Montane Alternative Silvicultural Systems (MASS) and, Ecosystem Management Emulating Natural Disturbance (EMEND). In addition, the forest sector has some effective regional models of delivery, e.g. Upper Lakes Environmental Research Network (ULERN), Quebec Forest Research Council (QFRC), Forest Research Extension Partnership (FORREX) in British Columbia and, Ontario Forest Research Initiative (OFRI).

Monitoring, Assessment and Reporting, Concepts, Terminology and Definitions

9. Improving information on national forest resources, making the information widely available, and assisting other countries in their related efforts

Collection and dissemination of national information on forests

Improve national forest resource assessments and make information related to sustainable forest management widely available – See response to question 1 above.

The CFS recently developed an illustrated print publication for the purpose of disseminating current information on Canada's forests to a broad audience of Canadians and visitors to Canada. The publication, *Forests of Canada*, presents a contemporary picture of the forest types found in Canada, and explores the ongoing relationship Canadians maintain with forests.

Canada is also providing international guidance on best information management practices through participation with FAO. With respect to Information Management for National Forest Resource Assessment a chapter is under development for FAO's "Online Knowledge Reference for National Forest Resource Assessment". (see

<http://www.fao.org/forestry/foris/webview/iufro/index.jsp?siteId=2881&langId=1&83210136>)

Canada, through various working groups of the North American Forestry Commission (NAFC) makes information widely available to the US and Mexico. In particular, Canada provides assistance to Mexico in the area of application of forest inventory and forest research within several topics including impacts of air pollution and silviculture.

Concepts, Terminology and Definitions

Canada supports the international process of harmonizing forest-related definitions led by FAO and participated in both expert meetings held in 2002.

Concepts, terminology and definitions are all part of the more general topic of Information Interoperability. The CFS acted as chaired of a conference on "Information Interoperability And Organization For National And Global Forest Information Systems" held as a side event to the XII World Forestry Congress. More information is available on this subject at:

<http://pfc.cfs.nrcan.gc.ca/interop/>.

As a member of the NAFC Working Group on Inventory, Monitoring and assessment, Canada cooperates with the US and Mexico in developing a common definitions to facilitate reporting on forest resources in North America.

Criteria and Indicators of Sustainable Forest Management

10. Developing and using criteria and indicators of sustainable forest management (at national level and/or subnational level and for policy, planning, management and/or

monitoring purposes), and participating in regional and/or international C&I processes

Domestic Activities

Canada's March 2003 report to the 3rd session of the UNFF noted Canada's use of the CCFM framework of Criteria and Indicators (C&I) to track progress toward sustainable forest management. The report also noted that C&I provide an important mechanism to facilitate stakeholder participation in forest sector planning, decision-making, and forest management, and that the CCFM C&I initiative has led to C&I initiatives at the provincial and local levels. The March 2003 report did not, however, provide much information on Canada's contribution to the Montréal Process C&I initiative.

This section provides an update on the CCFM C&I initiative and provides new information on the Montréal Process C&I initiative and other international C&I related activities.

Canadian Council of Forest Ministers (CCFM)

In 2000, the CCFM released Canada's national C&I report, *Criteria and Indicators of Sustainable Forest Management in Canada: National Status 2000*. This was Canada's first report on all of the indicators in the CCFM C&I framework. Building on the lessons learned from that report, and recognizing improvements in the capacity of information systems, approaches to forest inventories, data availability, and advances in science, in 2001, the CCFM approved a plan to review the 83 indicators in its C&I framework.

Public involvement was an important part of evaluating and refining the indicators in the C&I framework. In December 2001, a focus group study was undertaken to identify specific values, issues and concerns of Canadians with respect to sustainable use of the forest. Fourteen focus groups were conducted in five forest-based communities and two urban centres across the country. In total there were 113 participants from various sectors of society, of which about one third were women. The focus groups confirmed that the existing six criteria continue to be relevant and appropriate.

In February 2002, six Technical Working Groups (TWGs) comprised of 50 experts from the federal, provincial and territorial governments, academia, the Aboriginal community, industry, and other non-governmental organizations were then assembled to review the indicators in the C&I framework and recommend a revised set of indicators. The TWGs met several times during the year to review the indicators. During their review, the TWGs considered the values identified in the focus group study and used an objective set of selection criteria to revise the indicators.

In March and April 2003, the federal, provincial and territorial governments reviewed the indicators recommended by the TWGs. In May 2003, a discussion meeting on the recommended indicators was held with non-government users/stakeholders of the CCFM C&I. Representatives from 38 non-government organizations from the Aboriginal, academic, industry and

environmental communities were invited to attend or submit written comments. Final revisions to the indicators were made based on comments received.

The revised framework, containing 46 indicators, was released to the public on September 19, 2003 at the CCFM Annual Meeting and then distributed at the XII World Forestry Congress.

This revised CCFM C&I framework defines better what is meant by sustainable forest management in the Canadian context. This revision ensures that the framework is adaptable, allowing indicators to change as relevant Canadian values, issues and concerns change, while also ensuring that the indicators are as suitable and functional as possible. Collectively, these revised indicators provide an improved framework for describing the state of forests and forest management, and for periodically monitoring implementation of sustainable forest management. The C&I framework continues to identify those elements of the forest ecosystem, as well as our social and economic system, that must be sustained or enhanced.

The revised CCFM indicators can also be linked to other indicator reporting mechanisms in use, or being developed, such as the Montréal Process C&I, the FAO's Global Forest Resource Assessment, Canada's National Round Table on the Environment and the Economy's Environment and Sustainable Development Indicators Initiative, and the Canadian Biodiversity Index. During the review process, the TWGs carefully examined the Montréal Process indicators to ensure that the revised CCFM C&I are compatible with most of the Montréal Process' 67 indicators, while at the same time provide more detail and precision on values of importance to Canada. This will facilitate Canada's international reporting and will provide a basis for any future cooperation on developing and revising international criteria and indicators.

It should be noted that the newly revised Canadian Standards Association (CSA) Sustainable Forest Management System uses the CCFM criteria as a basis for this forest certification standard.

Canadian Model Forest Network: Criteria and Indicators Activities

Canada's Model Forest Program is an innovative means to involve individuals and local communities in accelerating the implementation of new approaches to forest management through shared decision-making. Each of Canada's 11 model forests is based on a partnership of groups and individuals possessing a broad range of forest values who collaborate in working toward their shared objective of sustainable forest management within the unique social, economic, and ecological conditions in their forest area. The Model Forest Program has been involved in numerous activities to develop and share approaches to improved forest practices. Many of these have been concerned with biodiversity and include alternative harvesting regimes, research projects, training for forest workers, monitoring methodologies, and dissemination of communications and educational tools. Numerous activities of Canada's Model Forest Program support open and inclusive participation in the development of forest management policies. More information on the Model Forest Program is available at www.modelforest.net.

Operational Scale Carbon Accounting Model

The Canadian Model Forest Network and the CFS have entered into a Collaborative Research Agreement to develop a forest carbon accounting model for application at the operational scale of forest management units. National joint efforts are underway for development of model applications, this being one of several scales that will work together. This tool is building on over a decade of research and development for the Carbon Budget Model of the Canadian Forest Sector (CBM-CFS2).

Aboriginal Indicators of Sustainable Forest Management

There are currently several Canadian processes developing indicators to measure and monitor sustainable forest management within an Aboriginal context. The Canadian Model Forest Network is currently preparing a synthesis report on indicators developed within an Aboriginal context. This report will be presented at a workshop on Local Level Indicators of Sustainable Forest Management hosted by the Canadian Model Forest Network in February 2004.

Certification and other indicators at the model forest level

The model forests that make up the Canadian Model Forest Network have been intensively involved in selecting, measuring and reporting on local level indicators since 1997. (For further information on local level indicators in model forests, please see http://www.modelforest.net/e/home/_locallee.html). This activity has been carried out by individual model forests, and has also been assisted by national initiatives. A major document was prepared compiling the information on local level indicators that the Canadian Model Forest Network has developed to date. It is essentially a “how-to” manual on local level indicators, based on work done to date within the model forests. Individual model forests use the criteria and indicators that they have developed for their specific areas in order to evaluate their performance. The Eastern Ontario and Bas-Saint-Laurent Model Forests have facilitated FSC certification for private landowners within their model forests. In addition, model forests are engaged in a variety of projects that link the criteria and indicators that they have developed to the operational activities of their partners.

International C&I Activities

Canada is a member of the Montréal Process Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests. As part of its continuing commitment to promoting C&I internationally, Canada continues to host the Montréal Process Liaison Office.

In September 2003, the Montréal Process Working Group released its *First Forest Overview Report 2003* at the XII World Forestry Congress. This report highlights the use of C&I in the 12 Montréal Process member countries. The Overview Report presents data available from all 12 countries for one selected indicator under each of the seven Montréal Process criteria. Canada contributed its sound science-based data and available historical trend data to this report.

Information for other Montréal Process indicators can be found in Canada's national C&I report, *Criteria and Indicators of Sustainable Forest Management in Canada: National Status 2000*.

Also at the XII World Forestry Congress, Canada hosted a special "high-level" meeting of the Montréal Process Working Group, which resulted in the release of the "Québec City Declaration". This Declaration reaffirms the commitment of the member countries to implementing the Montréal Process C&I and endorses 14 actions to further increase member country capacity to report on forests using C&I and to better inform policy makers on national progress toward sustainable forest management. Among the 14 actions is a commitment to review and, as needed, refine the Montréal Process indicators and to seek international endorsement of a global set of criteria.

Canada has also helped to promote C&I internationally and build capacity in other countries outside of the Montréal Process during the last year. Canada participated in the International Conference on the Contribution of C&I for Sustainable Forest Management: The Way Forward (CICI 2003) in Guatemala and provided input to the background papers prepared for the meeting. Canada also participated in a capacity building workshop at the 14th meeting of the Montréal Process Working Group in Montevideo, Uruguay in April 2003. This special one-day session was devoted to exchanging information and experiences among countries participating in the three C&I processes active in the western hemisphere: Lepaterique Process (Central America), Tarapoto Process (Amazon Basin) and Montréal Process, which includes six western hemisphere countries (Argentina, Canada, Chile, Mexico, Uruguay, USA). Additional countries in the region also participated. The meeting featured presentations from a number of experts on C&I. Canada also co-authored a paper with Mexico and the USA on the relationships between C&I at the international, national, sub-national and local levels in North America for the XXI session of the North American Forest Commission, October 22 – 26, 2002, in Hawaii.

III. Preparation of the Report

- 11. Describe the process of preparing this report, including which government agencies and stakeholder groups were involved, and the extent to which they contributed. Provide information on successes, challenges and lessons learned in the preparation of this report.**

The International Affairs Division of the Canadian Forest Service, Natural Resources Canada (CFS) sent an e-mail notification in November 2003 to interested parties in Canada regarding the preparation of a Canadian National report to the fourth session of the UNFF (UNFF 4). Notifications requested updated information to issues discussed in Canada's report to the third session of the UNFF, and information pertaining to the UNFF 4 agenda. Moreover, addressees were informed that the draft report would be circulated for comment. Messages were sent to the most relevant federal departments (Canadian International Development Agency, Environment Canada, The Department of Foreign Affairs and International Trade, Indian and Northern Affairs Canada, and Natural Resources Canada), provincial/territorial forest agencies, the National Aboriginal Forestry Association, the Canadian Environment Network (Forest Caucus), the Canadian Woodlot Owners Association, and Canadian members of the International Forestry Students Association.

The initial draft was prepared by the CFS and was based on submissions received and on two recent reports, “*A Final Evaluation of the National Forest Strategy*” prepared for the National Forest Strategy Coalition by an Independent Expert Panel and *The State of Canada’s Forests 2002-2003*. It also reflected previous work done in Canada to address the IPF/IFF proposals for action.

Comments were solicited from previously notified parties by e-mail. These parties were asked to circulate the draft document for comment widely and to provide input. All comments were taken into account in the final report submitted to UNFF.
