

Access and Benefit Sharing and Forest Genetic Resources: Seeing the Forest for the NTFP

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Introduction

Forests are essential for human survival and well-being. They account for 30 percent or 3.2 billion hectares of the earth's land area¹ and harbour two-thirds of all terrestrial animal and plant species. From an economic perspective, forests are the source for over 5,000 commercially-traded products, ranging from timber to food, pharmaceuticals and clothing, many of which are derived from non-timber forest products (NTFP).² Forests also provide key ecosystem services like food, fodder, water, soil, shelter, nutrient cycling, carbon sequestration and wildlife habitat, and also hold cultural and recreational value.³ Many forests are also biodiversity 'hotspots' that have a high number of endemic species.⁴ The genetic diversity of forests underlies the ecosystem services that forests provide and is the basis for long-term forest health and stability.⁵

They are also the traditional territories of indigenous peoples, many of whom possess rights to forest land and resources, including communal ownership or title, and manage their territories through their own institutions on the basis of customary law.⁶ Incidentally, the majority of the world's remaining biodiversity is concentrated in areas inhabited by indigenous and local communities.⁷

Yet, law and policy at all levels fails to effectively protect and preserve forests. At the international level, forests are governed through a multifaceted regime complex consisting of legally and non-legally binding instruments, as well as voluntary initiatives like certification schemes.⁸ This fragmented regime has not yet succeeded in successfully managing the many drivers of deforestation and forest degradation between and within nations. This imperils forest biodiversity along with the many ecosystem system services that forests provide. Rampant deforestation thus directly undermines the socio-economic basis of many forest communities, the wellbeing of forest ecosystem service users and, ultimately, the life support system of our planet.

Because of their importance in shaping the future of conservation and sustainable use of forest biological and genetic resources, the focus of this article is on the *Non-Legally Binding Instrument on All Types of Forests*⁹ (NLBI) and the *Nagoya Protocol on Access to Genetic Resources and the Sharing of Benefits Resulting from their Utilization to the Convention on Biological Diversity*¹⁰ (the Protocol). Canada is ALSO used as a national case study for the joint implementation of the provisions of the Protocol and the NLBI in a manner that is premised on sound ecological, social and economic principles conducive to the conservation of natural forest ecosystems and the protection, promotion and recognition of traditional ecological knowledge.¹¹ The article concludes that ABS could be part of a sustainable development law and policy toolkit to fund natural forest conservation while protecting and affirming the rights of First Nations to pursue distinct lifestyles and customs.

Forests and the Bioeconomy

One of the consequences of modern biotechnology for the global economy has been a shift in the focus of research and development from technological innovation to the life sciences. It has also lead to a revaluation of different knowledge systems. These changes have the potential to impact societies, economies and the natural environment, especially when considered in light of the interconnectedness between biological processes and cultures. One notable consequence is that the genetic resources and traditional knowledge of indigenous and local communities on the use of those resources has new-found value.¹² Another consequence is that biodiversity has become

a more valuable resource, making nature conservation a way to preserve and enhance existing natural capital for research purposes.

Many Canadians are unaware that Canada's natural forests contain a vast range of genetic resources that already contribute to local, regional and national economic development as a major facet of the bioeconomy.¹³ Researchers and manufacturers use a wide range of domestic and foreign forest genetic resources for scientific research and innovation in key economic sectors that make up the bioeconomy, which include the forestry, genomics, biotechnology and pharmaceutical industries, among others.¹⁴ One example is the pharmaceutical industry's use of cuttings from *Taxus Canadensis* (Canadian Yew) to produce paclitaxel, a cancer drug. In response to unsustainable practices, the Canadian Forest Service developed sustainable harvesting guidelines and created the Canada Yew Association, a partnering association, to ensure better returns to local communities and a more environmentally appropriate process.¹⁵

By 2006 there were almost 500 bio-products in commercial use in Canada that contributed approximately \$1 billion annually to Canada's economy. NTFP in particular are a key component of Canada's bio-product supply and future strategy. This is because of their proven marketability, potential to contribute to the development of new medicines, and ability to meet the growing demand for wild, natural and functional foods as well as nutraceuticals.¹⁶ From a strategic perspective, Canada has expansive and varied natural forests; First Nations with traditional knowledge on the uses of the animals, plants and fungi of those forests; and the scientific capacity to undertake wide-scale research and commercialization to promote the sustainable use of forest genetic resources. This means that ABS has a very real potential to diversify and strengthen the Canadian economy, protect natural forests and help Canada meet a range of sustainable development goals.¹⁷

However, Canada needs to adopt a far different approach to ABS to maximise the potential benefits and minimise deleterious impacts in the implementation of a domestic legal or policy regime on ABS. Primarily, it needs to view itself as both a user and provider of genetic resources in the global context.¹⁸ Canada struggles to meet its commitments in regards to ABS for a number of reasons, notably the Government's lack of interest in the issue,¹⁹ its antagonism toward the internationally recognized rights of indigenous peoples over biological resources,²⁰ and the complexity of implementing ABS in a federal state with the division of powers put in place by the *Constitution Act, 1867*.²¹

Over the past five years, the Canadian has held consultations and not made any clear steps toward developing a legal or policy framework on ABS. Canada is now entering its 7th year since focused consultations on a domestic ABS framework began (2004) and significant work remains to be done before Canada has a fully functioning ABS regime. No legislation has thus far been proposed to fill this void. Canada's failure to establish an ABS regime is in contrast to a number of other common-law federations with similarly complex division of power issues and sizeable indigenous populations, like Australia,²² India,²³ and South Africa.²⁴

Given the ABS opportunities available in Canada, the development of law and policy on ABS should be of interest and importance to people and groups from across society.²⁵ In particular, Aboriginal peoples have a serious interest in being involved in the development of ABS policies. Aboriginal peoples, who have lived in harmony with their surroundings for centuries, have gained a deep understanding of how the components of the environment are interconnected and have generally avoided technology that is destructive of natural harmony.²⁶ Increasingly, policy

makers and planners recognize the value of this traditional ecological knowledge as a valuable complement to science-based approaches to managing forests sustainably.²⁷

Canada's First Nations have an intimate cultural and spiritual relationship to Canada's forests and depend on the sustainable harvesting of forest resources for subsistence and income.²⁸ This may include gathering fruit, vegetables, and beverage plants, medicinal plants, and materials for traditional technology and rituals, plus hunting and snaring for meat and furs. First Nations' historic existence thus demonstrates the potential to obtain numerous goods and services from forests that enhance nutrition, food security, health and quality of life.²⁹ Because of this intimate relationship, possess a wealth of traditional ecological knowledge about these ecosystems relevant to the bioeconomy, including knowledge of current, previous, and potential uses of plants and animals, knowledge of the preparation, processing or storage of species, and knowledge of formulations.³⁰ It would follow that one of the best potential sources of information on the multiple uses of forests and their potential contributions to the bioeconomy are First Nations themselves. In fact, traditional ecological knowledge relating to forests (TFK) is already a well recognized source of information for the discovery and commercialisation of new products, as demonstrated by the discoveries of the antibiotic sanguinarine, derived from bloodroot, and the anticancer drugs etoposide and teniposide, derivatives of mayapple.³¹

Yet, it must be understood that the traditional ecological knowledge of indigenous peoples exists in a particular cultural context that does not necessarily overlap with Western conceptions of sustainable development and progress, nor do many indigenous peoples want it to. The coexistence of Western and indigenous world views will be a necessary prerequisite for collaboration.³² Unfortunately, we are not yet at that stage in Canada. Presently First Nations remain excluded from participation in most forest management decisions and participation in the modern bioeconomy, both of which have the potential to influence the economic, social and cultural well-being of First Nations and the conservation and sustainable use of forests.

To the great detriment of First Nations, adequate legal mechanisms do not yet exist to ensure that TFK is conserved, respected and protected. Patents are the preferred method for protecting biotechnological inventions based on the use and modification of genetic material because their underlying purpose is to turn knowledge into a marketable commodity. Their objective is not to conserve knowledge in its most fitting cultural, let alone traditional context. Traditional knowledge by its very character is integrative, holistic, and synergistic and often does not fit into the individualistic, monopolistic and linear prism which is at basis of conventional intellectual property law. New conceptions of intellectual property need to be crafted to compensate First Nations for the outside use of their knowledge in the market economy because traditional forest-related knowledge has a clear role to play in developing the bio-based economy and ensuring the sustainable use of forests. This must be recognized through appropriate benefit sharing mechanisms to recognize the role those who are the custodians and providers of TK.

International Forest Governance

Global deforestation: a common concern of humanity

By the 1980s, mankind's impact on the planet's forests had become an issue of international concern. Alarm was expressed over the destruction of tropical forests due to shifting agriculture, cattle ranching and over-exploitation for timber production, and the degradation and loss of temperate and boreal forests due to poor forest management and pollution from intensive agriculture, urbanization and industrial development.³³ This concern is evident from the opening

statement of the *World Conservation Strategy: Living Conservation for Sustainable Development*³⁴ (WCS): "Human beings, in their quest for economic development and the enjoyment of the riches of nature, must come to terms with the reality of resource limitation and the carrying capacities of ecosystems, and must take into account the needs of future generations... if the message of development is to provide for social and economic welfare, the object of conservation is to ensure Earth's capacity to sustain development and to support all life."³⁵

Despite recognizing the apparent limits on human exploitation of resources and ecosystems, the language of natural resource management at that time was on 'optimizing' and 'sustaining' resource use rather than conservation or sustainable use per se. For example, the 1982 World Charter for Nature³⁶ states that: "Ecosystems and organisms, as well as the land, marine and atmospheric resources that are utilized by man, shall be managed to achieve and maintain optimum sustainable productivity, but not in such a way as to endanger the integrity those other ecosystems or species with which they coexist."³⁷ The turning point was the Report of the World Commission on Environment and Development (WCED), *Our Common Future* (Brundtland Report) in 1987.³⁸ In its legal strategy for environmental protection and sustainable development the WCED proposed a series of legal principles, including that: "States shall maintain ecosystems and ecological processes essential for the functioning of the biosphere, shall preserve biological diversity, and shall observe the principle of optimum sustained yield in the use of living natural resources and ecosystems."³⁹ Unlike the World Charter for Nature, the primary objective became conservation, with 'optimum sustained yield' coming second. This was seen as progress from a Western viewpoint, but as mentioned above, the Brundtland Report does not espouse universally shared values on sustainable development, especially when it comes to the views of indigenous peoples.⁴⁰

The 1992 Rio Convention on Environment and Development

In response to the troubling message conveyed by the Brundtland Report, the United Nations General Assembly proposed to hold a Conference on Environment and Development (UNCED) in 1992. This proposal spawned negotiations over an international legally binding instrument on forests which were dominated by a high-level struggle between developed and developing states over the definition of 'forests' as either a global public good or sovereign national resource. An oft ignored claim was made by NGOs and indigenous groups that called for forests to be seen as local commons and with clear land tenure rights for local forest-dependent communities. Although negotiations failed, the developing country position that forests are a sovereign national resource eventually predominated and continues to exist as a matter of international law.⁴¹ This is apparent in the UNCED outcomes that bear upon forest governance, notably the CBD, *Rio Declaration on Environment and Development*⁴² (Rio Declaration), *Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests*⁴³ (Forest Principles) and *Agenda 21: Programme of Action for Sustainable Development*⁴⁴ (Agenda 21).

The negotiations on a legally binding international forest instrument continued after UNCED with the creation of the Intergovernmental Panel on Forests (IPF) in 1995 as a sub-group of the Commission on Sustainable Development (CSD).⁴⁵ After two years of negotiations, the IPF resulted in approximately 150 'proposals for action' for undertaking by States, but no legally binding mechanism.⁴⁶ Discussions continued from 1997 to 2000 under the mandate of the International Forum on Forests (IFF), which also included implementing the IPF proposals for

action. The IFF also resulted in a sizeable number of proposals for action, including the establishment of a permanent forum: the United Nations Forum on Forests (UNFF). Canada failed to get a legally binding forest convention despite its strong lobbying during the final plenary session of the IFF. The language Canada extracted from the parties was a pledge that the UNFF would within five years “consider with a view to recommending the parameters of a mandate for developing a legal framework on all types of forests.”⁴⁷ Despite not reaching a legally binding conclusion, the series of institutional arrangements on forests from 1995 to 2000 has facilitated information and experience sharing, helped establish trust and confidence between states and added to the body of soft international law on forests.⁴⁸

The Role of the United Nations Forum on Forests

The UNFF has overseen a plan of action focused on implementing the IPF and IFF proposals for action and the negotiation of further commitments on global forests since its founding in 2000.⁴⁹ The first major breakthrough at the UNFF was the political outcome of the 6th meeting.⁵⁰ It contained a package of measures to strengthen the international arrangement on forests and provided clear guidance on the future work of the Forum by adopting four ‘Global Objectives on Forests’ and clarifying the principal institutional functions of the UNFF. The *Non-legally binding instrument on all types of forests* was adopted at the 7th meeting of the UNFF on 28 April 2007 and is the most recent international consensus on the management of forests. Its objectives are to: strengthen political commitment and action at all levels for the implementation of sustainable forest management and achieve the Global Objectives on Forests; enhance the contribution of forests to the achievement of the internationally agreed development goals, including the Millennium Development Goals (MDG), and the MDG on poverty eradication and environmental sustainability in particular; and to provide a framework for national action and international cooperation.⁵¹

Canadian Forest Governance

The Canadian Council of Forest Ministers (CCFM) began shifting domestic forest policy away from ‘sustained yield’ in 1986. Reform was undertaken through consultations by with industry, academia and research organizations to develop a government forest policy statement. These consultations resulted in the 1987 *National Forest Sector Strategy for Canada* (1987 Strategy).⁵² The 1987 Strategy began the shift to forest use based on sustainable management principles, non-timber values and the number and range of benefits derived from forests. The focus of the Strategy on maintaining ecological integrity and non-timber values is reflective of the *World Conservation Strategy* (WCS) principles.⁵³

The CCFM formally adopted the sustainable development of forests as an objective in 1989 and set out to involve all forest stakeholders in developing a new approach to forest management.⁵⁴ This involved consideration of forest ecosystems as well as the social, cultural and economic values associated with forests, as expressed by the concept of sustainable development. The result was the 1992-1997 National Forest Strategy, *Sustainable Forests: a Canadian Commitment*,⁵⁵ which was the first strategy to adopt a unified vision regarding the values that Canadians expect of their forests in the future. *Sustainable Forests: a Canadian Commitment* made pledges on environmental, economic and social issues and led the CCFM to create the National Forest Strategy Coalition to oversee its implementation, comprised of 29 governmental and non-governmental organizations. Aboriginal interests in forest governance were first addressed in this Strategy.⁵⁶

The 1992-1997 strategy was developed during a tumultuous time in Canada's relationship with First Nations. The 1990 Supreme Court of Canada (SCC) decision in *R. v. Sparrow*⁵⁷ was the first high court decision to explore the scope of s. 35(1) of the Constitution Act, 1982 and "to indicate its strength as a promise to the aboriginal peoples of Canada."⁵⁸ *Sparrow* determined that historical policy on the part of the Crown neither extinguishes existing aboriginal rights without clear intention nor, in itself, delineate those rights.⁵⁹ It also clarified government's responsibility to act in a fiduciary capacity with respect to aboriginal peoples and that to justify an infringement of unextinguished aboriginal rights, legislative objectives must be attained in such a way as to uphold the honour of the Crown and be in keeping with the unique contemporary relationship, grounded in history and policy, between the Crown and Canada's aboriginal peoples.⁶⁰ Lastly, *Sparrow* established that courts should avoid the application of traditional common law concepts of property as they develop their understanding of the "sui generis" nature of aboriginal rights and that it is crucial to be sensitive to the aboriginal perspective itself on the meaning of the rights at stake.⁶¹ In 1991, the Royal Commission on Aboriginal Peoples (RCAP) was brought together to investigate and report on the Aboriginal situation throughout the country, which it did in 1996. The report addressed forest co-management as one aspect of its recommendations.⁶²

The *National Forest Strategy (1998-2003), Sustainable Forests: A Canadian Commitment*⁶³ was launched to revitalize the commitments made in 1992 by adopting new or revised objectives, more specific commitments, and pursuing the ongoing goal of enhancing forest ecosystems for the benefit of all.⁶⁴ The National Forest Strategy Coalition was also expanded to 52 members, demonstrating a commitment to active public participation and transparency in achieving sustainable forest management.⁶⁵ The *National Forest Strategy for 2003-2008*⁶⁶ stemmed from the efforts of the National Forest Strategy Coalition and stakeholder input via workshops, consultations and opportunities for dialogue. This led to it being a consensus-based document which had the objective of ensuring that the long-term health of Canada's forest be maintained and enhanced for the benefit of all living things as well as the social, cultural, environmental and economic well-being of all Canadians now and in the future.⁶⁷

Canada's National Forest Strategy from 1987 to 2008 gradually expanded the number of actors participating in the forest policy debate while gradually shifting the focus of forest management from maximum timber yield to a vision based on the multiple uses of forests and the value of forest ecosystems and forest landscapes.⁶⁸ The most recent policy document, *A Vision for Canada's Forests: 2008 and Beyond*,⁶⁹ takes a different approach to forest management with the goal of "effecting far-reaching change in the forest sector". Unlike its immediate predecessors, it is an aspirational document and focuses primarily on laying out a vision for the future and promoting the increased awareness of forest issues. It still recognizes sustainable forest management as being the framework for forest management in Canada, but further notes that it is only through embracing the principles of stewardship, innovation, partnership, transparency and accessibility that the forest sector will be able to overcome current challenges and take advantage of emerging opportunities. The Vision also looks beyond an ecosystem-based or integrated landscape approaches to forest management by urging for recognition of the evolving nature of sustainability, including consideration of the effects of climate change and the provision of environmental goods and services.⁷⁰ Lastly, it acknowledges that as dialogue between aboriginal peoples and other forest sector partners evolves, this will continue to create opportunities that will benefit all while strengthening SFM.

First Nations, Forests and the Constitution

About 80% of First Nations - more than 800 Aboriginal communities - are located in Canada's productive forests where approximately 3.5 million acres of reserve lands are suitable for resource uses such as forestry, hunting, trapping, fishing and gathering herbs and medical plants. This is increasingly reflected in forest policy and forest management practices, where First Nations have played a new role over the last two decades.⁷¹ In contrast to historical practice, Canada's forest governance strategy now addresses the fact that Aboriginal people in Canada have rights, interests and ambitions pertaining to forests.⁷² Their aboriginal and treaty rights are recognized and affirmed by s. 35 of the *Canadian Constitution Act, 1982*.⁷³ It reads:

35. (1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.
- (2) In this Act, "aboriginal peoples of Canada" includes the Indian, Inuit, and Métis peoples of Canada.
- (3) For greater certainty, in subsection (1) "treaty rights" includes rights that now exist by way of land claims agreements or may be so acquired.
- (4) Notwithstanding any other provision of this Act, the aboriginal and treaty rights referred to in subsection (1) are guaranteed equally to male and female persons.

The adoption of section 35 of the *Constitution Act, 1982* was the culmination of a long and difficult judicial and political struggle for the constitutional recognition of aboriginal rights. Despite the high profile that Aboriginal issues gained during the repatriation of the Constitution in 1982, Aboriginal claims and rights were not readily acknowledged in respect to forests in their traditional territories.⁷⁴ However, the modern objective of aboriginal law is to reconcile the respective claims, interests and ambitions of the First Nations of Canada and Canada's non-aboriginal inhabitants.⁷⁵ Constitutionally recognized aboriginal rights fall along a spectrum with respect to their degree of connection with the land: on one end are those rights related to activities which are insufficient to support a claim of title; in the middle are activities which, out of necessity, take place on the land and might be intimately related to a particular piece of land and engage a site-specific right to undertake a particular activity; at the other end is aboriginal title.⁷⁶ Aboriginal title encompasses the right to exclusive use and occupation of the land for a variety of purposes that are not irreconcilable with the nature of the group's attachment to that land.⁷⁷

In order to establish a claim to aboriginal title, the aboriginal group asserting the claim must establish that it occupied the lands at the time at which the British Crown asserted sovereignty, 'continuity' between present and pre-sovereignty occupation, and exclusive occupation of the land.⁷⁸ Both the common law and the aboriginal perspective on land are important to take into account in establishing proof of occupancy, which acts as proof of possession at common law and grounds title to the land.⁷⁹

If occupation was not exclusive, shared, non-exclusive aboriginal rights short of title but tied to the land that permit a number of uses can be established. This is because the common law should try to recognize aboriginal rights as they were recognized by *de facto* practice or aboriginal system of governance.⁸⁰ The right to choose what uses land can be put, subject to the ultimate limit that those uses cannot destroy the ability of the land to sustain future generations of aboriginal peoples, suggests the fiduciary relationship between the Crown and aboriginal peoples can be satisfied by the involvement of aboriginal peoples in decisions taken with respect

to their lands. Ultimately, there is always a duty of consultation upon the Crown, and in many cases it will be “significantly deeper than mere consultation”.⁸¹

The Supreme Court of Canada, in two 2004 decisions - *Haida Nation*⁸² and *Taku River Tlingit*⁸³ - advanced the standards for “consultation and accommodation” in Canada. The result is that in particular circumstances, both the national and provincial/territorial governments of Canada are required to consult with aboriginal people affected by government decision-making and to accommodate their interests.⁸⁴

Reconciling First Nation claims, interests and ambitions on forests will require both levels of government. The Provinces must be involved because of an amendment made to the *Constitution Act, 1867* during its repatriation in 1982 that incorporated a new section on natural resources, forestry resources and electrical energy.⁸⁵ This clarified that the provinces have clear legislative supremacy over the development, conservation and management of forestry resources, including laws regulating the rate of primary production.⁸⁶ Yet, many of Canada's obligations to First Nations are constitutionally designated to the Federal Government as a result of s. 91(24) – “Indians, and Lands reserved for the Indians”.⁸⁷

First Nations Management of Forests under Treaties and Land Claim Agreements

Aboriginal involvement in forest management also takes place based on formalized aboriginal entitlements under land claims and treaties.⁸⁸ Aboriginal groups with self-government agreements and/or comprehensive land claim agreements often manage the grant of access to lands and resources under their jurisdiction. This can be demonstrated by reference to modern agreements between First Nations and the Crown, such as the *Nisga'a Final Agreement Act*⁸⁹ and *Sahtu Dene and Métis Comprehensive Land Claims Agreement*.⁹⁰ The *Nisga'a Final Agreement Act* assigns ownership of all forest resources on Nisga'a lands to the Nisga'a Nation,⁹¹ as well as the exclusive authority to determine, collect, and administer any fees, rents, royalties, or other charges in respect of non-timber forest resources on treaty lands.⁹² The Nisga'a may also regulate the harvesting and conservation of NTFP on Nisga'a Lands.⁹³ Finally, they can enter into agreements with the Province of British Columbia or the Government of Canada with the purpose of coordinating and administering the management of NTFP.⁹⁴ The *Sahtu Dene and Métis Comprehensive Land Claims Agreement* also grants the Sahtu the right to regulate access to treaty lands and recognizes aboriginal peoples' connection to the land by creating land claim parks to conserve natural areas of national significance and encourage public understanding, appreciation and enjoyment of these areas while providing for the rights aboriginal peoples to harvest wildlife and plants.⁹⁵ Thus, the Sahtu have the right to harvest trees on their traditional lands and land claim parks in the Northwest Territories (NWT) for traditional, cultural and medicinal uses, subject to forest management, land use, conservation, public health, public safety and environmental protection legislation⁹⁶ They also have the right to gather plant material for food, medicine, cultural and other personal purposes subject to the same legislative restrictions.⁹⁷ In 2010, Parks Canada signed a co-management agreement with The Sahtu Dene community of Deline for the Saoyu and Ehdacho National Historic Site of Canada.⁹⁸

First Nations and Provincial Forest Management

All thirteen Canadian provinces and territories have forest policy strategies and/or legislation, including Newfoundland and Labrador,⁹⁹ Prince Edward Island,¹⁰⁰ Nova Scotia,¹⁰¹ New Brunswick,¹⁰² Quebec,¹⁰³ Ontario,¹⁰⁴ Manitoba,¹⁰⁵ Saskatchewan,¹⁰⁶ Alberta,¹⁰⁷ British Columbia,¹⁰⁸ Yukon,¹⁰⁹ Northwest Territories¹¹⁰ and Nunavut.¹¹¹ Provincial and territorial

governments across Canada are encouraging partnerships with forest dependent aboriginal groups to improve their socio-economic well-being.

In eastern Canada, the Innu Nation of Labrador is involved in a unique partnership with the government of the province of Newfoundland and Labrador to implement a strategic forest management plan in an area that is under comprehensive land claim negotiations. The plan itself was jointly prepared under a previous agreement designed to facilitate communication, share information and resolve issues concerning the development of sustainable forestry practices and ecosystem-based management.¹¹² Yet, when one looks deeper, there is no reference to aboriginal interests or rights in the provincial *Forestry Act*.¹¹³

The provincial government of Quebec and Eeyou Istchee (Grand Council of the Crees) reached the *Paix des Braves* in 2002, an historic agreement to pursue joint development of the James Bay region for a period of fifty years.¹¹⁴ The agreement implements some recommendations of the Royal Commission on Aboriginal Peoples and provides for the sharing of revenues derived from forestry carried out on the traditional lands of the Cree people.¹¹⁵ It is based on a development model which relies on the principles of sustainable development, partnership and respect for the Cree way of life, as well as on a long-term economic development strategy in conformity with the provisions of the *James Bay and Northern Québec Agreement*.¹¹⁶ The *Paix des Braves* provides increased economic and community development support for the Cree throughout the James Bay region, notably, support for increased participation by the Cree in the planning and management of the region's immense forests.¹¹⁷

In central Canada, Manitoba Conservation has initiated co-management agreements with Aboriginal organizations to share roles and responsibilities in addressing resource management issues and opportunities. In Saskatchewan, following a reallocation of major forest licences, all new licences in the province must involve partnerships with Aboriginal businesses.¹¹⁸

In British Columbia, the provincial government is committed to increasing economic opportunities for First Nations in the forest sector by sharing forest revenues and by more than doubling their share of the province's allowable annual harvest to eight percent, much of this through reallocation from forest companies.¹¹⁹ The Aboriginal Affairs Branch of the BC Ministry of Forests and Range has entered into a large number of agreements with First Nations in British Columbia for revenue-sharing and forest tenure.¹²⁰ However, the Province of British Columbia has been slow to respond to the Supreme Court of Canada's decisions in *Haida Nation* and *Taku Tlingit* on aboriginal consultation.¹²¹

First Nations Forests Partnerships with Government of Canada

Canada's federal government also conducts initiatives and programs such as the First Nations Forestry Program (FNFP), founded in 1991, funded by Natural Resources Canada and Indian and Northern Affairs Canada and delivered in partnership with First Nations. The Program provides funding and support to improve the capacity of First Nations to develop and sustainably manage their forest resources and to participate in and benefit from forest-based development opportunities. Its purpose is to improve economic conditions in status First Nation communities with full consideration of the principles of sustainable forest management.¹²² One recent FNFP success story is the forest botanic garden at the Squamish Lil'wat Cultural Centre in Whistler, British Columbia. The garden was established to preserve and celebrate the cultural and natural heritage of both the Squamish and Lil'wat First Nations and features a number of NTFP, such as culinary herbs, mushrooms and medicinal plants. Both of these First Nations are interested in

expanding commercial activities into European and Asian markets.¹²³

First Nations and Forestry Certification Schemes

Voluntary certification schemes have recently gained attention as a mechanism to promote the sustainable management of forests. Certification most commonly refers to an optional, independent, third party verification process that evaluates compliance with a set of environmental and social standards and principles derived from best practices in the field and national and international law.¹²⁴ There are three major forest certification schemes in Canada: the Forest Stewardship Council (FSC), the Canadian Standards Association (CSA), and the Sustainable Forestry Initiative (SFI). All three of the schemes are voluntary, but some have prerequisites to associate with or participate in the certification process, such as membership in industry associations or access to timber on Crown land. FSC has the strictest prerequisites of them all, with a focus on meeting internationally recognized criteria and indicators for sustainable forest management.

As an example of how certification aims to promote SFM, the Canadian Standards Association standards include references to biodiversity, maintenance and enhancement of forest ecosystems, conservation of soil and water resources, the contribution of forests to global ecological cycles, multiple benefits to society, and society's responsibility for sustainable development. The Forest Stewardship Council's (FSC) principles and criteria for forest management are the highest standards in Canada for forest management and include direct reference to aboriginal rights.¹²⁵ In fact, a number of aboriginal groups, such as Pictou Landing First Nation (Nova Scotia), Tk'emlúps Indian Band (British Columbia), and Meadow Lake Tribal Council (Saskatchewan), have their forest management practices certified by under the FSC SmartWood Programme.¹²⁶

Recently, the unique Canadian Boreal Forest Agreement was reached between 21 major Canadian forest products companies and nine leading Canadian environmental NGOs. The Forest Products Association of Canada (FPAC), companies operating in the boreal forest, and Environmental NGO put aside traditional differences to build on past collaboration and pursue "a shared desire for a renewed and world-competitive sustainable forest sector, robust northern communities, vibrant wilderness, and a healthy, fully functioning boreal ecosystem."¹²⁷ It applies to more than 72 million hectares of forest all the way across Canada. It explicitly recognizes Aboriginal and treaty rights and title as well as their legitimate interest in and aspirations for the management of the boreal forest.¹²⁸

It has been argued that a country like Canada might want to support legally binding certification mechanisms at the global level because of Canada's relatively high level of certified forests. This globally binding approach would make Canadian timber more competitive in the global market and put developing countries at a disadvantage because many of their forestry operations face hurdles in getting certified.¹²⁹

Access to Genetic Resources and Benefit Sharing

The Convention on Biological Diversity (CBD) sets overall goals, policies and general obligations, imposing few well defined targets or specific obligations upon its parties.¹³⁰ Responsibility for achieving the CBD's goals rests mostly with the countries themselves, which have significant latitude on which laws, policies and regulations are established in order to meet those objectives.¹³¹ As a result, States bear the responsibility for bringing together the three aspects of sustainable development law in the ABS mechanism by creating a framework to direct

economic incentives created by the potential commercial value of genetic resources towards the conservation of these same resources and the equitable sharing of benefits with the people or communities involved.¹³² This goal is reflected in the objectives of the CBD, notably:

...the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.¹³³

The rest of the Convention elaborates on how these objectives should be achieved. Article 15 articulates principles and obligations of Parties related to access to genetic resources and the fair and equitable sharing of benefits arising out of the utilization of genetic resources.¹³⁴ It begins by reaffirming the sovereign rights of States over their natural resources, deeming that the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.¹³⁵ Parties to the Convention must endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses by other Parties and not to impose restrictions that run counter to the Convention's objectives.¹³⁶ These objectives include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources.¹³⁷ Access to genetic resources, where granted, must be based on mutually agreed terms, and is subject to the prior informed consent of the providing Party unless otherwise determined by that Party.¹³⁸ Lastly, Parties have the obligation to take appropriate legislative, administrative or policy measures with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources.¹³⁹

The ABS provisions of the CBD were first clarified through the Bonn Guidelines on ABS in 2002.¹⁴⁰ They were created to provide guidance to Parties, Governments and other stakeholders in developing comprehensive access and benefit-sharing strategies, such as legislative, administrative or policy measures. They also set out the basic steps involved in obtaining access to genetic resources and benefit-sharing, such as prior informed consent (PIC), mutually agreed terms (MAT), roles and responsibilities, and stakeholder involvement. Furthermore, the Bonn Guidelines address incentives, accountability, verification and dispute settlement. Lastly, they enumerate suggested elements to include in material transfer agreements (MTA) and include an indicative list of monetary and non-monetary benefits. They were adopted by consensus with 180 countries present, which demonstrated significant political will to further implement of ABS.¹⁴¹ This political will was capitalized upon during the 2002 Johannesburg World Summit on Sustainable Development (WSSD), which resulted in a call to negotiate an international regime to promote and safeguard the fair and equitable sharing of benefits arising out of the utilization of genetic resources.¹⁴² Negotiations began in 2004 and concluded in 2010 with the adoption of the Nagoya ABS Protocol.¹⁴³

Although the links between the Nagoya ABS Protocol and the CBD's provisions are rather clear, the preamble to the Protocol makes them explicit. The Protocol's objective is the fair and equitable sharing of benefits per the third objective of the CBD, thereby contributing to the CBD's first and second objectives.¹⁴⁴ Similarly, the Protocol's scope is strictly limited to 1) genetic resources within the scope of Art. 15 of the CBD and to the benefits arising from the

utilization of such resources, and 2) traditional knowledge associated with genetic resources within the scope of the CBD and to the benefits arising from the utilization of such knowledge.¹⁴⁵ The Protocol contains a somewhat broad definition of utilization of genetic resources, which essentially captures major types of utilization of genetic resources. Furthermore, this definition is clarified with the term 'derivative' which is defined as a "naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity."¹⁴⁶

The Nagoya ABS Protocol contains a series of provisions that create a web of reciprocal obligations between countries engaged in the access and utilization of genetic resources. First, it establishes a general requirement obliging all Parties to establish "appropriate, effective and proportionate" measures to ensure that genetic resources and related traditional knowledge utilized within their jurisdiction have been accessed with prior informed consent and that mutually agreed terms have been established, as stipulated by the rules in the providing country.¹⁴⁷ It also contains a provision on the utilization of genetic resources held by indigenous and local communities.¹⁴⁸ This goes further than the CBD or the Bonn Guidelines where the role of indigenous and local communities is only linked to traditional knowledge. The Protocol also provides that access to genetic resources be premised on prior informed consent of indigenous and local communities, in cases where they have the right to grant access to such resources.¹⁴⁹ Furthermore the Protocol reaffirms the fact that customary laws, community protocols and procedures of ILCs should be taken into account. Also of interest is that the Protocol contains a provision that calls on parties to take measure to ensure compliance with traditional knowledge associated with genetic resources. There are certain elements in the Protocol that will require further negotiations. In cognizance of this, decision X-1 of CBD COP 10 established an Ad Hoc Intergovernmental Committee (ICNP) for the Nagoya Protocol on ABS as an interim governing body until the first meeting of the Parties (MOP).¹⁵⁰

Because the Protocol contains a series of provisions that bear on forest governance, its implementation at the national level will require a cross-sectoral approach. Access and utilisation of forest resources may now fall partially within the regulatory ambit of the Protocol, especially in the case of forest genetic resources and associated traditional knowledge. It is thus imperative that the interface between forest governance and ABS be further explored to identify opportunities, challenges, and key considerations for its implementation in domestic law and policy.¹⁵¹

The Nagoya Protocol also provides that access to genetic resources be premised on prior informed consent of indigenous and local communities, in cases where they have the right to grant access to such resources.¹⁵² Furthermore the Protocol contains an effective obligation to take into account and support development of customary laws, community protocols and procedures of ILCs.¹⁵³ This obligation will be incumbent on Canada if it decides to ratify the Protocol and should thus be fully reflected in Canada's national ABS strategy. It also denotes the need to define clear land tenure and forest usage rules which recognize the rights of indigenous peoples as both stewards and users of forest genetic resources.

The Nagoya Protocol contains a series of provisions that have direct bearing on forest governance. Thus, its implementation at the national level will require a cross-sectoral approach because access and benefit sharing relating to forest genetic resources (FGR) and associated TFK will now fall within the regulatory ambit of the Protocol.¹⁵⁴ The final text of the Protocol contains a series of provisions that predicate a number of obligations on both user and providing

countries. First, the Protocol generally requires all Parties to establish “appropriate, effective and proportionate” measures to ensure that genetic resources and traditional knowledge utilized within their jurisdiction have been accessed with the prior informed consent and in accordance with established mutually agreed terms, as stipulated by the rules in the providing country.

On the institutional front, Parties are required to designate national institutions to perform functions relating to the Protocol. Each Party needs to designate one national focal point to be responsible on its behalf for liaison with the Secretariat of the Protocol. The functions for liaison may include, for example the notifications requirements in relation to the issuance of access permits, certificates etc. Each Party is also required to designate one or more competent national authorities, which are responsible for undertaking the various administrative functions required by the Protocol and which shall be sanctioned to act on its behalf with respect to those functions. According to the Protocol, a Party may designate a single entity to fulfill the functions of both focal point and competent national authority.

The Nagoya Protocol contains a specific provision on the utilization of genetic resources held by indigenous and local communities.¹⁵⁵ This goes beyond the ABS provisions of the CBD or the Bonn Guidelines where the role of indigenous and local communities is only linked to the use of traditional knowledge. The Nagoya Protocol also provides that access to genetic resources be premised on prior informed consent of indigenous and local communities, in cases where they have the right to grant access to such resources.¹⁵⁶ Furthermore the Protocol reaffirms the fact that customary laws, community protocols and procedures of ILCs should be taken into account.¹⁵⁷ Also of interest is that the Protocol contains a provision that call on parties to take measure to ensure compliance with traditional knowledge associated with genetic resources.¹⁵⁸

The Canadian ABS Regime

There are no national laws specifically targeted at the issue of ABS. Legislative jurisdiction over the subjects that constitute an ABS regime is shared between Parliament, Provincial/Territorial Legislatures and Aboriginal First Nations.¹⁵⁹ A Canadian ABS regime will need to take into account this division of legislative powers contemplated by ss. 91, 92 and 92A of the *Constitution Act, 1867*.

In general, Parliament has the authority to legislate over genetic resources found on federal crown lands,¹⁶⁰ or in federal government possession (e.g. plant material held in a federal plant research centre). Parliament also has legislative authority over patents¹⁶¹ and copyrights¹⁶² as well as interprovincial and international trade,¹⁶³ and aboriginal peoples and their lands.¹⁶⁴ Lastly, relevant regulations on biotechnological innovations have been made by the Federal government’s environmental law power under the Canadian Environmental Protection Act.¹⁶⁵

On the other hand, the provinces and territories have authority over public lands within their area of jurisdiction and associated forest resources (forest genetic resources being a part thereof).¹⁶⁶ They have jurisdiction over the law of property (real and personal) and its derivatives, such as laws governing access to privately-owned lands and land-use planning. They also have jurisdiction over the laws of contract and tort.¹⁶⁷ They may also regulate intraprovincial trade under 91(13). The protection of heritage or cultural property is also within provincial jurisdiction.¹⁶⁸ Broadly speaking, the provinces and territories face very real differences in terms of their economic sectors, resource management legislation and land ownership patterns. For example, in many parts of the country private land accounts for less than 10% of the total area of

a province or territory while the level is 50% or more in some Atlantic provinces.¹⁶⁹

Development of Canada's ABS Strategy

Between 2004 and 2006, a series of awareness-building activities were organized under the leadership of Environment Canada in order to better define and understand Canada's interests in ABS. They involved the federal government, the provinces and the territories in different workshops whose main goal was to inform Canadian stakeholders of the policy process and gather their views.

Scientists, industry representatives, aboriginal representatives, representatives from non-governmental organizations, academics, policy-makers, and lawyers from across the country were invited to attend these events. They included "Access and Benefit-sharing of Genetic Resources: The Science and Technology Agenda Expert's Workshop" in December 2004, "Northern Workshop on Access to Genetic Resources and Associated Traditional Knowledge and Benefit-Sharing" in March 2005 and "Access to Forest Genetic Resources and Benefit-sharing: Potential Opportunities and Challenges for Governments and Forest Stakeholders" in February 2006.¹⁷⁰

In 2005, federal, provincial and territorial governments agreed on the following policy objectives and core principles to guide Canadian approaches to managing genetic resources: Environment-focused: contributing to the conservation and sustainable use of biodiversity; Practical and Economically Supportive: - generating and sharing economic benefits of the utilization of genetic resources among both providers and users as a means of contributing to sustainable development; Simple, Efficient and Adaptable - taking into account different sectors and allowing for different approaches in different jurisdictions; Supportive of current governmental policies, and building on and respecting Canada's existing international commitments; Balanced, equitable and transparent: balancing responsibilities between users and providers of genetic resources in a manner that is clear and whose rationale makes sense to all concerned; and, Inclusive: developed and implemented with the appropriate involvement of Aboriginal groups and communities.¹⁷¹

Despite the progress made between 2004 and 2006, the arrival of a new Federal Government in 2006 led to a delay in the ABS policy-making process. In the spring of 2009 a Federal/Provincial/Territorial Task Group led by Environment Canada, with guidance from the Canadian Council of Resource Ministers, including the Canadian Council of Forest Ministers, Canadian Parks Council and Canadian Endangered Species Conservation Council,¹⁷² was established to examine the issue of ABS policy in Canada and to develop options for consideration by Canadians.¹⁷³ The process was based on a discussion paper, *Access to Genetic Resources and Sharing the Benefits of Their Use in Canada: Opportunities for a New Policy Direction*, that presented options for a domestic policy on ABS and how traditional knowledge could be addressed in that policy. The main caveat is that the Government is not committed to adopting a policy on ABS at all.¹⁷⁴ Two years later, there has been no decision as to how Canada's policy will be developed in response to the comments received, or whether a policy will be developed at all.

The discussion paper recognizes that, regardless of whether ABS policy in Canada is coordinated at a national level or made up of independent approaches in various jurisdictions, there will be a need for processes and measures to implement the policies – legislation, regulations, guidelines and voluntary tools (i.e. codes of conduct, administrative policy and procedures). This creates a

need to consider to what extent it will be possible to apply existing tools readily at hand – particularly laws and regulations relating to property and resource management – to genetic resources.

For example, ABS policy in Canada may be able to take advantage of existing laws and regulations pertaining to property, trespass, theft and contracts. The constitutional, legislative, social, cultural and economic factors which shape various Canadian jurisdictions must be addressed to develop effective ABS policy. A nationally consistent approach would be the result of federal, provincial and territorial cooperation on a national ABS policy based on common principles and core elements. Jurisdictions would tailor implementation to address their own circumstances, but would try to ensure consistency among their approaches wherever possible. Those sectors that have already developed and are practicing their own ABS systems would be able to maintain their existing practices under the national approach, provided they meet the core principles agreed to by the jurisdictions.¹⁷⁵

It was suggested that this approach could help build common approaches to the core elements of ABS policy in Canada. In cases where genetic resources are shared across jurisdictions, it could discourage users from seeking to access genetic resources within a jurisdiction where the policy is either absent or relatively undeveloped. As well, increased legal certainty for both users and providers of genetic resources could attract more scientific research and thus generate greater benefits for Canada and Canadians. At the same time, others have noted that a coordinated approach could require a significant investment of effort and time to get the approval of the various implementing jurisdictions and there is a risk that some practices which already exist in some sectors may have to be modified.¹⁷⁶

An independent approach for each jurisdiction would allow ABS policies to be developed independently in each jurisdiction without any formal attempt to coordinate common principles and core elements. Jurisdictions would also have the option of not developing an ABS policy at all and continuing with the status quo. This approach could better enable provinces and territories to adopt ABS policies and implement approaches that best fit their specific needs. It also could allow implementation of ABS measures to move at a faster pace than coordinating ABS policy in Canada with a number of jurisdictions. On the other hand, it could produce a patchwork of inconsistent policies which could result in confusion about the different rules which apply to ABS in different places in Canada. It also could lead to duplication of effort among jurisdictions in terms of developing the tools and skills needed to administer ABS policy in Canada.¹⁷⁷

Finally, the federal government could develop a single ABS policy for Canada. It has been suggested that this approach could make implementation of ABS measures simpler, because there would be just one jurisdiction developing the policy for other jurisdictions to adopt. It also could increase legal certainty about the use of genetic resources for both users and providers of genetic resources, which could encourage further investments in conservation and building scientific knowledge of biodiversity. However, because of the way powers are shared in Canada, this approach could result in an inefficient and limited national policy, as provinces and territories could choose not to participate. It could also be difficult to adapt and administer a single national approach to the different circumstances in different provinces and territories as well as for different sectors and sub-sectors.¹⁷⁸

In the end, the Federal/Provincial/Territorial Task Group elaborated three potential approaches to implementation: voluntary and non-regulatory measures; improvement of existing policies; or

the development of a specific policy response.¹⁷⁹

Voluntary and Non-Regulatory Measures

First, voluntary and non-regulatory measures could be used to complement existing processes, laws and practices. This would implement ABS policy using existing laws in relevant legal areas such as contract law and property law, building on current mechanisms, practices and international agreements for access and benefit sharing and the transfer of technology between researchers and industry. Implementation would be supported by new and existing non-regulatory tools and voluntary measures like guidelines and codes of conduct. Core elements, such as prior informed consent to access genetic resources and the sharing of benefits arising from their use, would be addressed through such voluntary measures.¹⁸⁰

It has been suggested that this approach could be the simplest one to develop, and could require less work to implement than the other options considered. There are good examples of guidelines and codes of conduct developed by other countries or other organizations which Canada could adapt. In addition, this approach would mean that existing practices that currently apply to elements of access and benefit sharing in certain sectors could continue unchanged,¹⁸¹ which could be the case in the forest sector given the relative maturity of forest governance in this area. However, the effectiveness of relying only on voluntary measures such as codes of conduct and guidelines is questionable given the relatively low level of awareness of ABS issues, even among users of genetic resources. As well, such an approach may not bring any additional legal certainty for users and providers of genetic resources, or provide a firm guarantee that the core elements of ABS policy in Canada would be adequately addressed.¹⁸²

Improvement of Existing Policies

Secondly, regulatory and non-regulatory measures could be used to complement existing processes, laws and practices. The focus would remain on using existing laws, regulations and non-regulatory measures where possible (as in approach 1 above), and implementation would be supported through current and newly developed non-regulatory tools and voluntary measures. However, in addition, legislation and regulations would be amended to specifically address genetic resources where gaps are identified. For example, existing permitting systems regulating access to land and biological resources could be amended to specifically address access to and collection of genetic resources and the sharing of benefits resulting from their use. An example of existing regulation or regulation pertaining to access to genetic resources would be those pertaining to research permits for accessing plants in protected areas.¹⁸³

It has been suggested that this approach could help speed implementation of ABS measures across Canada, when compared with the third option outlined below, given that this approach would take less time than developing and enacting new ABS-specific rules. At the same time, some feel that it could actually involve greater complexity, and thus could take longer to implement than the third option, due to additional administrative burden in amending regulations. Some also question whether or not existing mechanisms, which were developed to regulate access to other natural resources, are really well designed to regulate access to genetic resources or the sharing of benefits arising from their use.¹⁸⁴

Specific Policy Response

Thirdly, ABS-specific legislation and regulations could be developed federally and/or provincially and territorially. Such laws would establish the requirements for obtaining prior

informed consent for access to genetic resources and for negotiating the terms of use and the arrangements for the sharing of benefits resulting from the use of genetic resources. Such an approach could bring a consistency of application of ABS policy in Canada, which would ensure legal certainty to users and providers of genetic resources in Canada. However, it may take time before new legislation is created and implemented, increasing the risk that existing gaps in laws and regulations relating to ABS would remain in the meantime. The costs of developing, maintaining and enforcing any new legislation also could outweigh, at least in the short term, any benefits from increased access to genetic resources. This new legislation could also create duplication with existing legal requirements in some provinces or territories, which is why synergies and issues should be identified beforehand.¹⁸⁵

ABS and Traditional Forest-Related Knowledge

ABS should be seen as an opportunity to retain the integrity of forest ecosystems and, in consequence, protect the livelihoods of forest dependent First Nations communities. It could also lead to community development in the forest and contribute to the social, economic, political and natural capital of First Nations; and, receive returns for FGR and TK, thereby validating the value of TK and non-wood forest products, renewing interest in its benefits.¹⁸⁶ Unique considerations in the context of ABS and aboriginal peoples include: establishing the relationship between holders of traditional knowledge with the recognition of collective rights; elaborating how access and benefit sharing policies will define “equitable” and “fair” compensation given aboriginal rights over forest genetic resources; respecting the spiritual context of traditional forest related knowledge when defining the parameters of ABS; ensuring that benefits accrue to Aboriginal Peoples who provide the knowledge associated with the use of FGR; acknowledging the two solitudes that exist in forest management through multiple frameworks to deal with distinctive legal, cultural and economic requirements; and, taking a distinct approach for aboriginal peoples, such as establishing an aboriginal working group that takes into consideration lessons learned through past aboriginal experience.¹⁸⁷

The Task Group identified three potential approaches to how traditional knowledge associated with genetic resources could be addressed by ABS policy in Canada. First, it could be addressed through voluntary mechanisms and tools. Examples of such measures include voluntary guidelines and best practices, awareness-raising, education campaigns, and other tools (such as model contracts and confidentiality agreements). Voluntary guidelines could assist users to access knowledge and share benefits on mutually-agreed terms. Knowledge holders who choose to share and who want to gain benefits arising from that use could consider formal contractual arrangements with parties interested in access to that knowledge. This approach could allow for more streamlined ABS policy in Canada, as it would require no new rules, or slight changes to existing ones. At the same time, this approach does not guarantee the same level of legal certainty to users and providers of genetic resources and/or associated traditional knowledge.¹⁸⁸

Traditional forest-related knowledge associated with genetic resources could also be addressed through existing regulatory measures supported by new regulatory and voluntary measures developed to implement requirements related to prior informed consent, mutually agreed terms and benefit sharing with the providers of genetic resources. This would leave the issue of traditional knowledge to be addressed when users and providers of genetic resources are contracting for access and benefit sharing. A user could be required to indicate if they accessed traditional ecological knowledge associated with genetic resources which is not already in the public domain, or if they expect to access such knowledge after they have accessed a particular

genetic resource. Where TKGR is accessed, users would need to demonstrate that they gave prior informed consent to the provider of the traditional knowledge and that the parties have reached mutually agreed terms on use and benefit sharing. This approach would better acknowledge the value that TKGR can provide to users of genetic resources, and could provide security to holders of TKGR that are considering sharing their knowledge but are concerned about how it might be used. Some administrative work would be required to change existing mechanisms and thus it would be complicated to implement, especially in regards to private land or resources.¹⁸⁹

Lastly, traditional forest-related knowledge associated with genetic resources could be addressed by new ABS-specific legislation and regulations developed at the federal and/or provincial and territorial level. These mechanisms would include requirements for obtaining PIC and MAT, providing consistency of application and legal certainty for the users and providers of such knowledge and benefit sharing from their use with Canadians. However, the complexity of developing, maintaining and enforcing new ABS legislation that protects TKGR would be greater than ABS legislation limited only to genetic resources.¹⁹⁰

Reforms to patent policy could be one of the most significant policy and legal challenges regarding ABS in Canada. The main point of controversy is over the disclosure of origin/source of genetic resources and associated traditional knowledge in patent applications. This concept would use the patent system to track the origin of a genetic resource used in a patented innovation so that benefits arising out of the commercialization of the invention would flow back to the source of origin. The Canadian *Patent Act* does not require applicants to disclose the origin of genetic resources in patent applications. Technical and administrative solutions arising from the concept of disclosure of origin/source (such as certificates of origin) will have to be fully explored before any determination can be made as to the purpose, feasibility, cost, and impact of a disclosure requirement. At the legal level, questions remain about the ownership of plant genetic resources and the knowledge associated with the uses of plants.¹⁹¹ Differences of opinion even exist over whether certain forms of genetically-based inventions should be patentable subject matter.¹⁹²

The introduction of a disclosure requirement involving the origin of genetic resources and proof of prior informed consent of the use of traditional knowledge in patent claims has been under heated debate at the international level.¹⁹³ Many biodiversity rich countries consider it to be an essential component of a broader approach to patent law, while a few industrialized countries believe that it is incompatible with current international law and that it undermines the value of patents as titles to private property rights because it complicates procedures and reduces legal certainty.¹⁹⁴ The contentious nature of the debate has gone so far as to cause international discussions on the advancement of standards of patentability to stall, potentially prejudicing the interests of investors in obtaining secure titles which are less prone to being challenged.¹⁹⁵ A strict disclosure requirement would be incompatible with international law, including the CBD, but there may be ways to adopt the requirement that would be in compliance with international law.¹⁹⁶ Canada will need to play a strong role internationally to bridge its role as both a user and provider of genetic resources and offer sound solutions to the issue of non-disclosure.

Existing Domestic Laws on ABS

As noted previously, there is no developed ABS framework in Canada. However, there are some laws and regulations and practices in place in different jurisdictions that would be a part of or

addressed by any future ABS framework. The federal government has a permitting system in place for research and collection in national parks.¹⁹⁷ One existing project explores how the commitment of Aboriginal groups, academics, government and non-governmental organizations to using or integrating traditional ecological knowledge into the decision-making process is affecting resource management, namely how aboriginal systems of management and knowledge are shaping management structures as well as the use of terminology, concepts and procedures in the decision making-process.¹⁹⁸ Material transfer agreements exist between academic institutions, researchers and private business, and various industry sectors also have policies or practices regarding access and benefit sharing. In those cases ABS is mostly governed by the policies and practices of the institutions directly involved or by day-to-day practices.¹⁹⁹

Canada's three northern territories – the Yukon, the Northwest Territories (NWT), and Nunavut – have gone the furthest in implementing access systems that accord with ABS. Each territory has research licensing legislation that serves as a form of access system. The licensing of research in the NWT and Nunavut is governed by the *Scientists Act*,²⁰⁰ which requires anyone conducting scientific research or collecting specimens for scientific research in the jurisdictions of the territories to obtain a license.²⁰¹ Research on wildlife or the collection of specimens of wildlife is exempt as is archaeological work, although these activities require permits under other legislation.²⁰² Research in the Yukon is licensed by the *Scientists and Explorers Act*,²⁰³ which restricts scientific and exploration activities to persons holding a valid license issued under the Act.²⁰⁴

Applications for licenses under the *Scientists Act* are made to the Aurora Research Institute in the NWT and the Nunavut Research Institute in Nunavut. The Aurora Research Institute is part of Aurora College and its mandate is to improve the quality of life for the NWT's residents by applying scientific, technological and indigenous knowledge to solve northern problems and advance social and economic goals.²⁰⁵ The mission of the Nunavut Research Institute is to provide leadership in the development, facilitation and promotion of Qaujimanituqangit (traditional Inuit knowledge), science, research and technology as a resource for the well being of the people of Nunavut.²⁰⁶

The *Scientists Act* makes no distinction between scientific and commercial research. The Aurora Institute interprets this to mean that “[w]ithout exception, all research in the Northwest Territories must be licensed. This includes work in indigenous knowledge as well as in the physical, social and biological sciences.”²⁰⁷ The Act also makes no mention of prior informed consent, but the application process requires written confirmation that the researcher has discussed their plans with the agencies and/or communities affected and that they provide support to proceed.²⁰⁸ The Department of Environment and Natural Resources, Forest Management Division also reviews all forest-related research proposals, which means that research related to trees and/or plants may require a Forest Research Licence under the *Forest Management Act* and Regulations.²⁰⁹ Obligations for benefit-sharing are largely limited to reporting and sharing research results.²¹⁰

The NWT and Nunavut research licensing systems are frequently used. The Aurora Research Institute, headquartered in the NWT, documents hundreds of licenses issued under the *Scientists Act* in the year 2007 in areas including ethnography, biology, protected areas, and traditional knowledge.²¹¹ The Nunavut Research Institute counts over one hundred research projects undertaken in the territory in 2002 under the *Scientists Act* in the areas of health, physical sciences, and social sciences and traditional knowledge.²¹²

Next Steps: Ratification and Implementation of the Protocol in Canada

The Canadian approach to implementation of international law into domestic is founded on the premise that international law constitutes a distinct and separate legal system in relation to Canadian law. Treaties, such as the Nagoya ABS Protocol, are typically negotiated and formally approved by the executive branch of the government and cannot have domestic force unless they are given effect by a legislative act. Even the many treaties, which have been implemented by some, form of legislative, regulatory or executive act are not often invoked directly before the courts. This approach proposes that, due to the distinct character of international and municipal law, domestic courts can only apply international law once it has been transformed into local law by means of legislation. According to this approach, the Nagoya ABS Protocol, for example, would require domestic legislation on biodiversity that specifically incorporate the provisions of this instrument into Canadian law.²¹³

What results is that Canada will need to put in place a co-operative governance approach to ensure that forest related considerations are duly addressed and mainstreamed in a national ABS regime. This will allow for the establishment of a cohesive approach which will in the end rather than an uncooperative, fragmented and disjointed governance efforts relating to forest governance and the conservation and sustainable use of genetic resources. The challenge is thus to approach ABS implementation in manner that effectively strays away from fragmentation which could lead to discontinuous and fragmented legislations; policies; and governance tools, processes, structures and procedures.. Co-operative governance may thus serve as a useful mechanism to address the fragmentation of the environmental governance in Canada and hence ensure that ABS implementation is undertaken in a manner that is aligned and premised on integrated structures, processes and tools for the conservation of biodiversity and the sustainable of its elements. Ownership, authority, jurisdictions and power are key issues for consideration among federal, provincial, municipal and aboriginal responsibilities, in the context of ABS.

Legislative differences between federal, provincial and aboriginal governments as well as the differences in the application of the common law or civil law, as well as potential gaps, have to be assessed and addressed. There are some encouraging developments that can be noted. In 2004, the Federal, Provincial and Territorial Ministers responsible for Forests, Wildlife, Endangered Species and Fisheries and Aquaculture (FPTWG) recognized in the need to put in place integrated approaches to optimize the management of genetic resources.²¹⁴ In order to safeguard the social and environmental interests associated with genetic resources and to maximize their potential economic benefit, the FPTWG on ABS is currently developing ABS policy options on a range of items. This process is premised on key guiding documents, including the CBD and the Bonn Guidelines.²¹⁵

Canada could also benefit if its approach to implementing the Nagoya Protocol is cognizant of other international instruments, which often draw synergies between various cross-sectoral environmental issues. One example that is particularly pertinent for the purpose of this paper is the UNFF Non-Legally Binding Instrument on all Types of Forests. The Instrument contains several provisions that address ABS related issues and is generally relevant as it regulates forest genetic resources which evidently fall within the scope of the Nagoya Protocol. Notably, the Instrument refers to the concept of benefit sharing regarding the use of traditional forest related-knowledge (TFRK) in SFM. Article 6(f) of the Instrument specifically stipulates that national policies should “support the protection and use of traditional forest-related knowledge and practices in sustainable forest management, with the approval and involvement of the holders of

such knowledge, and promote fair and equitable sharing of benefits from their utilization, in accordance with national legislation and relevant international agreements.” The Instrument further recognizes the need to seek the approval and involvement of holders of TFRK. The implementation of the Nagoya Protocol will thus need to be approached in an integrated way both on the domestic front and on the international level to ensure that Canada’s approach to ABS is consonant with related international obligations.

Conclusion

ABS is a very complex concept that encompasses a broad range of issues, but the opportunity exists to develop a coherent ABS regime that functions alongside and compliments existing forest governance. In developing such an ABS regime, a number of things should be kept in mind. Firstly, Canada's interests can be promoted internationally if Canadian policy-makers develop ABS policies that build on forest-related and other domestic policies and legislation and recognize that Canada is both a user and a provider of genetic resources.²¹⁶ Secondly, while creating ABS law and policy at the domestic level, policy-makers can draw on lessons learned from forest-related policies and market mechanisms. Thirdly, ABS provides an opportunity to broaden the focus of forest management beyond trees and consider the importance of FGR found in non-timber forest products, thus supporting the development of alternative economies, such as the bio-based economy. Lastly, the Model Forest Network may be a key vehicle to begin implementing ABS in the forest sector in Canada.²¹⁷

There will be challenges in creating domestic ABS policies. Domestic ABS policies should include mechanisms that will enable jurisdictions in Canada to assess the level of bioprospecting activities being conducted in the forest. To be efficient, ABS policies require an accurate inventory of FGR and adequate monitoring activities. The debate around ABS should focus less on the economic value of the GR but rather prioritize environmental protection through the achievement of the first and second objectives of the CBD: the conservation and sustainable use of biodiversity. Ownership, authority, jurisdictions and power are key issues for consideration among federal, provincial, municipal and aboriginal responsibilities in the context of ABS. Who will ultimately make decisions regarding the ABS of FGR? Legislative differences domestically, as well as potential gaps, have to be assessed and addressed. Common definitions of FGR, TK, BS, derivatives, etc. must be developed that are acceptable to all stakeholders. In the context of TK associated with FGR in Canada, it can be difficult to define investments in research and when they begin and end. Under ABS policies, new guidelines might have to be defined and implemented.

Once Canada decides to be bound by the Protocol, the Canadian government will have to decide whether specific implementing action is required, whether existing legislation at the national or provincial level is adequate, and if not, whether the treaty should be implemented by legislation at the federal or provincial level. Signature and ratification do not, of themselves, make treaties operate domestically in Canada. In the absence of legislation, treaties cannot impose obligations on individuals nor create rights in domestic law. Nevertheless, international law, including treaty law, is a legitimate and important source for the development of the common law and may be used in the contextual interpretation of statutes.

Key considerations for developing ABS policies relating to forests include ensuring the genetic variability and sustainability of forest genetic biodiversity and respecting pre-existing criteria and indicators for sustainable forest management. As part of the larger biodiversity context, ABS

policies must integrate environmental methodologies such as the ecosystem approach (including ecosystems interacting with forests), as well as global environmental issues such as climate change. To bring jurisdictional clarity, ABS policies must clarify who holds the rights related to forest genetic resources and who holds the intellectual property rights related to the use of those resources when common knowledge belongs to a forest community or aboriginal community. ABS policies should contribute to and facilitate value-added development at the forest community level as well as promote innovation. Finally, ABS policies must ensure that long term economic benefits are provided in a fair and equitable manner through the conservation and sustainable use of Canada's forest genetic diversity. To contribute to the public good, these policies must provide fair and equitable benefits to aboriginal and other forest stakeholders by ensuring that significant benefits accrue at the local level to help preserve the viability of aboriginal and rural forest communities.²¹⁸

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- ¹ Marcus Colchester, "Beyond Tenure: Rights-based approaches to peoples and forests, some lessons from the Forest Peoples Programme" at 2. Online: forestpeoples.org
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