

Canadian Submission in response to CBD notification 81207

Identification of Scientific and Technical Needs related to the implementation of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Targets

Annex I and II below comprise Canada's input to CBD Notification 81207 responding to decision XI/13 which seeks input on the Identification of Scientific and Technical Needs related to the implementation of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Targets.

Canadian Context:

In Canada, responsibility for the conservation and sustainable use of biodiversity is shared across different levels of government as well as civil society and industry. As such, implementation of the Strategic Plan and its Aichi Targets requires cooperation. The federal government assumes the lead role for migratory species as well as wildlife on federal lands and management of Canada's marine resources. Provinces and territories are typically responsible for land and resource use within their boundaries, including the regulation of hunting and angling and the management of wildlife populations, forestry and agriculture.

The effective engagement of Aboriginal communities in biodiversity-related initiatives is also critical to Canada's ability to meet its biodiversity goals.

Given Canada's shared approach to managing biodiversity, information for this submission was collected by the CBD Canadian focal point with the aid of federal/provincial/territorial colleagues, previous consultations with National Aboriginal Organizations as well as non-government organizations.

Canada has a long history of valuing biodiversity and has in turn developed various national tools and strategies towards the maintenance of healthy and diverse ecosystems. These are in some cases equivalent to the tools found under the Convention that have been adapted to the Canadian context. In other cases, these national tools and strategies have been used to influence the tools and guidance developed under the Convention.

The Convention products have also had a high impact for policy support and guidance in Canada and were highly influential when first adopted, but may be less relevant in today's context given the national management tools that have been developed. For these reasons, some parts of the Annexes are blank.

Canadian Response to Appendix I

Policy support tools and methodologies

Policy support tools and methodologies	Decisio n/ Refere nce	Most relevant Aichi Target(s)	Other relevant Aichi Target(s)	Information related to nation application or use of the policy support tool or methodology		
				Level of application	Impact	Challenges to national application
Strategies						
Strategic Plan for Biodiversity 2011-2020	X/2			Canada is in the process of developing national biodiversity goals and targets for 2020. These 2020 goals and targets are informed and inspired by the global “Aichi Targets” and tuned to the domestic context. At the sub-national level, he Ontario Government used the Strategic Plan in the development of the Ontario Biodiversity Strategy and Action Plan. NGOs such as POWER are also using the Strategic Plan to engage civil society in biodiversity conservation and sustainable use.		
Global Strategy for Plant Conservation 2011-2020	X/17			High	- SIGNIFICANT - GSPC used to develop a National Response Framework with the idea of mainstreaming the GSPC through interested agencies and	- Prioritization of plant conservation programs takes place at the provincial level - While the plant

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					<p>organizations, primarily those participating in the Canadian Botanical Conservation Network (CBCN) http://archive.rbg.ca/cbcn/en/index.html.</p> <ul style="list-style-type: none"> - Established four recommendations: - consider how to establish an Important Plant Areas (IPA) network in Canada, - to develop and undertake communications and awareness-building program for the GSPC in Canada, - to undertake a capacity assessment for plant conservation in Canada, using the GSPC targets as the framework, and -to formally re-align CBCN as a national partnership for plant conservation. <p>Efforts are underway through Canadensys to implement a national bioinformatics framework for biodiversity data, which will further support achievement of several of the GSPC targets at the national level.</p>	conservation and botanical gardens community are very interested in the GSPC and its implementation in Canada, these are almost all not-for-profits of varying sizes.
<i>Programmes of work</i>						
Programme of Work on Agricultural Biodiversity	V/5	7, 13	4, 8, 14			
Programme of Work on Dry and Sub-humid	V/23	5, 7, 14	11, 13,	Applied when the situation and		

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Lands			15	funding initiative warrant.		
Programme of Work on Forest Biodiversity	VI/22	5, 7	11, 14, 15	<ul style="list-style-type: none"> - Applied sub-nationally and used by some gov'ts but not others for management - Used by all for policy support 	<ul style="list-style-type: none"> - Less relevant now than when adopted in 2002 - high impact for policy support and guidance and was highly influential when first adopted - low to medium impact as a management tool 	<ul style="list-style-type: none"> - Canada is a federation, so has to be implemented sub-nationally, therefore use has been discretionary by sub-national gov'ts but all have used it as policy guidance - however, much more information is available now on Sustainable Forest Management) SFM, making the PoW somewhat out of date. - PoW needs to be technically revised to be more relevant based on new and recent science
Programme of Work on the Biological Diversity of Inland Water Ecosystems	VII/4	7, 14	8, 11	Canada manages its shared inland waters through long-standing bilateral agreements with the U.S. Hence the application of this POW has been minimal.	Low	
Programme of Work on Marine and Coastal Biodiversity	VII/5	6, 10	7, 11	Used as background information for development of Department of Fisheries and Oceans policies / practices / science advice		
Programme of Work on Mountain Biodiversity	VII/27	5	11, 12, 14			
Programme of Work on Island Biodiversity	VIII/1	10, 12	5, 9, 11			

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Programme of Work for the Global Taxonomy Initiative	VI/8, VIII/3	19	1	<p>Mechanisms for applying the work program at the national level do not exist in Canada.</p> <p>Canada has a GTI National Focal Point (the Canadian Museum of Nature – Dr. Mark Graham), but that is more of an information liaison and not a policy application function.</p>	The heightened awareness of the importance of taxonomy through the GTI and its program of work was partly responsible for the 2010 assessment of the status of taxonomic capacity in Canada by the Council of Canadian Academies (http://www.scienceadvice.ca/en/assessments/completed/biodiversity.aspx). It was not a policy document but positions the issue of taxonomic expertise to be addressed by policy.	Financial challenges
Programme of Work on Protected Areas	VII/28	11	5, 6, 7	<p>Canada's national, provincial and territorial systems and networks of protected areas are well positioned in a global context. The Program of Work commitment to establish a comprehensive MPA network within an overall ecosystem approach by 2012 has guided Canada's approach to MPA network planning.</p>	<p>MEDIUM</p> <ul style="list-style-type: none"> - Canada's national, provincial and territorial systems and networks of protected areas are well positioned in a global context. - The Program of Work commitment to establish a comprehensive MPA network within an overall ecosystem approach by 2012 has guided Canada's approach to MPA network planning. - A network was not established by 2012, but a national framework for Canada's network of 	There are protected areas systems established and managed by 13 jurisdictions in Canada (federal, provincial and territorial governments), applying a single approach consistently to any dimension of protected area establishment and management is a challenge. Nonetheless, Canada's systems and networks of protected areas are well positioned in a global context.

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					MPAs was approved in principle	
Programme of Work on Technology Transfer and Cooperation	VII/29	19				
Programme of Work on the Implementation of Article 8(j) and Related Provisions of the Convention on Biological Diversity	V/16	18	14	<p>Implementation of Article 8(j) was incorporated by the federal/provincial/territorial governments into the Canadian Biodiversity Strategy (1996).</p> <ul style="list-style-type: none"> - Respect for and use of traditional knowledge has been reflected into federal environmental legislation such as the <i>Migratory Birds Convention Act</i> and <i>Species at Risk Act</i>. - The Government of Canada provides annual biodiversity funding to the national organizations that represent the First Nations, Inuit and Metis and their representatives routinely participate on Canadian delegations to Convention meetings. - The objectives of the Convention and Article 8(j) have 	Article 8(j) has played a significant role in the development of national policy and legislation on biodiversity conservation and sustainable use with regards to the use of traditional knowledge.	The Programme of Work on Article 8(j) seeks objectives which go beyond In-Situ Conservation. This makes implementation at the national level challenging.

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				been applied by many Aboriginal groups across Canada at the local government and community level		
<i>Tools, guidelines or principles acknowledged in decisions of the Conference of the Parties</i>						
The Tkarihwaí:ri Code of Ethical Conduct to Ensure Respect for the Cultural and Intellectual Heritage of Indigenous and Local Communities.	X/42	18	16, 17		None.	Implementation of some of this Code's elements might be inconsistent with Canada's other international legal obligations.
Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species	VI/23	9	5, 12	Applied. The Canadian IAS strategy is predicated on (or at least, aligns closely with) the CBD IAS guiding principles. The guiding principles have also been used as background information for development of Department of Fisheries and Oceans policies / practices / science advice		
Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities	VII/16	18	17	Many aspects of these guidelines are reflected in the <i>Canadian Environmental Assessment Act</i> .	Positive.	While many aspects of the Akwé: Kon Voluntary Guidelines are reflected in environmental policy and law in Canada, jurisdiction over lands and waters rests with many levels of governments including

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						the Government of Canada, provinces and territories, regional governments and municipalities and Aboriginal governments.
The Ecosystem Approach	VII/11	All		Cited as support for Sustainable Forest Management in Canada. Also used as background information for development of Department of Fisheries and Oceans policies / practices / science advice.	High	
Guidelines on Biodiversity and Tourism Development	VII/14	4				
Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity	VII/12	4, 6, 7		Applied	High policy impact at national level for forests; probably unknown at sub-national level	Communication of support tools at sub-national level
Bonn Guidelines on Access to Genetic Resources and Fair and Equitable sharing of the Benefits Arising out of Their Utilization	VI/24	16		The Bonn Guidelines have informed federal, provincial and territorial thinking on access and benefit sharing of genetic resources as well as the development of community protocols for aboriginal peoples.	Moderate	Several different jurisdictions exercise control over genetic resources in Canada and any ABS policy will need to balance the interests of a range of stakeholders.
Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment	VIII/28	2	4			

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Proposals for the Design and Implementation of Incentive Measures	VI/15	3	2			
Proposals for the Application of Ways and Means to Remove or Mitigate Perverse Incentives	VII/18	3	2			
Proposed Voluntary Guidelines to Parties for Review of NBSAPs	VIII/8	17	All	Consulted to develop Canadian NBSAPs	moderate	
Options for Preventing and Mitigating the Impact of Some Activities on Selected Seabed Habitats, and Ecological Criteria and Biogeographic Classification System of Marine Areas in Need of Protection	UNEP/CBD/SBSTT A/13/I.NF/13	6, 10		Used as background information for development of Department of Fisheries and Oceans policies / practices / science advice. Used as a reference document in the development of the Eastern Canadian Cold Water Coral and Sponge Conservation Strategy, in that it was read prior to the release of the strategy and the strategy was compared against it. It was useful in providing some international context to our regional strategy. It also provided a good reference to identify areas in the strategy where gaps may occur. The strategy outlines many of the elements that	High	

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				are noted within UNEP/CBD/SBSTT A/13/INF/13, such as impacts to corals and sponges, legislation and policies (international, national and regional), and management mechanisms such as NAFO closures, IM and MPAs. The Annexes for each region identify conservation, management and research targets and actions. Codes of conduct are not identified as highlighted in UNEP/CBD/SBSTT A/13/INF/13 as tools are being developed such as the MPA Network, SFF and ERAF.		
Mountain biological diversity: Indicative list of technologies relevant to the conservation and sustainable use of mountain biological diversity and other related thematic areas and cross-cutting themes	UNEP/CBD/SBSTT A/8/7/Add.1	5	7			not used nationally; national Forest PoW is more relevant
Marine Spatial Planning and Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine	UNEP/CBD/SBSTT A/16/7	6, 10	2, 5	Used as background in projects exploring various risk-based assessment and planning tools at		

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and Coastal Areas				regional and national scales		
Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas	UNEP/CBD/SBSTT A/16/7/Add.1	6, 10	5	Used as background in projects exploring various risk-based assessment and planning tools at regional and national scales		
Advice on the Application of Relevant REDD+ Safeguards for Biodiversity, and on Possible Indicators and Potential Mechanisms to Assess Impacts of REDD+ Measures on Biodiversity	UNEP/CBD/SBSTT A/16/8	15	5			
Guidance on ways to conserve, sustainably use and restore biodiversity and ecosystem services while contributing to climate change mitigation and adaptation	X/33, para 8 (a) to (z)	10, 15	11, 14			
<i>Developed by the Secretariat of the Convention on Biological Diversity</i>						
Training Manual for the Description of Ecologically and Biologically Significant Areas (EBSAS) in Open-Ocean Waters and Deep-Sea Habitats	UNEP/CBD/SBSTT A/16/I/NF/9	6	10	Used as the main foundation for development of practices and activities for implementation of policies and/or advice. The EBSA guidance serves as the starting point for MPA planning. Also used as the criteria to provide Canadian input into the Arctic Council's exercise to develop areas sensitive to shipping.	High	
GSPC Toolkit		12		Used to develop National Response	See GSPC	See GSPC

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				Framework to the GSPC		
Ecosystem Approach Sourcebook		14		Used at the sub-national as background for application of the ecosystem approach (e.g. British Columbia's Central and North Coast Land and Resource Management Plan).		
CBD Technical Series 6: Sustainable management of non-timber forest resources		4, 7				
CBD Technical Series 9: Facilitating conservation and sustainable use of biological diversity		5, 7	4			
CBD Technical Series 10: Interlinkages between biological diversity and climate change		10, 15		Used as background for some forest policy	Some impact on forest policy	
CBD Technical Series 12: Solutions for sustainable mariculture - Avoiding the adverse effects of mariculture on biological diversity		6	10			
CBD Technical Series 13: Technical advice on the establishment and management of a national system of marine and coastal protected areas		11	6, 10	Consulted as background document to inform Canada's draft 'Technical guidance for establishing Canada's networks of MPAs'		
CBD Technical Series 14: Integrated marine and coastal area management (IMCAM) approaches for implementing the Convention on Biological Diversity		6, 10	8			
CBD Technical Series 15: Biodiversity Issues for Consideration in the Planning, Establishment and		11	2			

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Management of Protected Area Sites and Networks						
CBD Technical Series 22: Guidelines for the Rapid Ecological Assessment of Biodiversity in Inland Water, Coastal and Marine Areas		10, 14	8			
CBD Technical Series 26: Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment		2	4			
CBD Technical Series 27: Valuing wetlands - Guidance for valuing the benefits derived from wetland ecosystem services (published as Ramsar Technical Report # 3)		2	5, 8	Similar RAMAR tool entitled: <i>An Integrated Framework for Avoiding, Mitigating, and Compensating for Wetland Losses (Resolution XI.9, 2012)</i> was used to develop Environment Canada Framework for Use of Conservation Allowances.		Global generic nature of Ramsar and/or CBD documents
CBD Technical Series 24: Closing the Gap: Creating ecologically representative protected area systems		11		Consulted as background document to inform Canada's draft 'Technical guidance for establishing Canada's networks of MPAs'		
CBD Technical Series 26: Guidance for Promoting Synergy Among Activities Addressing Biological Diversity, Desertification, Land Degradation and Climate Change		5, 10, 15	14	Applied when the situation and funding initiative warrant. Stimulated on-going discussions on improving synergies among Conventions		

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CBD Technical Series 28: An Exploration of Tools and Methodologies for Valuation of Biodiversity and Biodiversity Resources and Functions		2	1	Used as an information resource for analysis planning	Pending	
CBD Technical Series 30: Guide to the Global Taxonomy Initiative		19				
CBD Technical Series 32: Sourcebook on Remote Sensing and Biodiversity Indicators		19				
CBD Technical Series 35: Implementation of the CBD Programme of Work on Protected Areas: Progress and Perspectives		11				
CBD Technical Series 36: Protected Areas in Today's World: Their Values and Benefits for the Welfare of the Planet		11				
CBD Technical Series 37: Synthesis and Review of the Best Available Scientific Studies on Priority Areas for Biodiversity Conservation in Marine Areas beyond the Limits of National Jurisdiction		11	6, 10	Used as secondary source of information for prioritization when developing science advice on some components of planning for national MPA network. Influential in parts of work done for Arctic Council, with secondary impacts on DFO interests and practices.		
CBD Technical Series 39: Cross-Sectoral Toolkit for the Conservation And Sustainable Management of Forest Biodiversity		4	5, 14, 15			
CBD Technical Series 44: Making protected areas relevant : a guide to integrating protected areas into wider landscapes, seascapes and		11				

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sectoral plans and strategies						
CBD Technical Series 48: Pets, Aquarium, and Terrarium Species: Best Practices for Addressing Risks to Biodiversity		9				
CBD Technical Series 49: Guidelines for Mainstreaming Gender into National Biodiversity Strategies and Action Plans		17				
CBD Technical Series 53: Biodiversity Indicators & the 2010 Biodiversity Target: Outputs, experiences and lessons learnt from the 2010 Biodiversity Indicators Partnership		19	All	Applied where there is overlap with national indicators	Indicator systems already in place, so little impact	
CBD Technical Series 58: Developing Ecosystem Indicators: Experiences and lessons learned from sub-global assessments and other initiative		14, 19	All			
Good Practice Guide: Tourism for Nature & Development		4				
Good Practice Guide: Sustainable Forest Management, Biodiversity and Livelihoods		4, 5	14			
Good Practice Guide: Pastoralism, Nature Conservation and Development		5				
Good Practice Guide: Drinking Water, Biodiversity and Development		14				
Good Practice Guide: Biodiversity, Development and Poverty Alleviation		14	All			
Good Practice Guide: Ecosystem Goods and Services in Development Planning		2, 4	14			
Good Practice Guide: Linking the Thematic Programmes of Work of the Convention on Biological Diversity (CBD) to Poverty Reduction and Development		All				
Communication, Education and Public		1				

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Awareness (CEPA) - A Toolkit for National Focal Points and NBSAP Coordinators						
Options for the Application of Tools for Valuation of Biodiversity and Biodiversity Resources and Functions		1, 2		Used as an information resource for analysis planning	Pending	
Programme of Work on Protected Areas E-Learning Modules		11				
Managing Tourism & Biodiversity: User's Manual on the CBD Guidelines on Biodiversity and Tourism Development		4				
NBSAP Capacity Building Modules		17	all			
Quick Guides to the Aichi Biodiversity Targets		all				
<i>Other Relevant Tools</i>						
Forest certification systems Canadian Forest Service : Certification		7	5, 12	high	high	
Restoring Lake Winnipeg - A basin-wide watershed management plan		11		high	high	
Environmental Farm Planning In Canada: A 2006 Overview		7		high	high	
The Federal Government sponsored Sustainable Development Technology Canada (SDTC) is a not-for-profit foundation that finances and supports the development and demonstration of clean technologies which provide solutions to issues of climate change, clean air, water quality and soil.		19		high	high	
National initiative on "Measuring Ecosystem Goods and Services". aimed at producing national ecosystem accounts. This work includes case studies of values of wetlands, coastal		2				National process to develop national ecosystem accounts is developing

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communities and protected areas; national delineation of “statistical units” for ecosystem accounting (including through a national standard land cover classification); research into defensible methods of benefits transfer for ecosystem services valuation; and research to develop a small set of indicators of ecosystem potential and ecosystem quality.						independently.

Canadian Response to **Appendix II**

Scientific and technical needs related to the implementation of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets

Aichi Targets ¹	CBD Tools and guidance		National target setting, monitoring and assessment		Technical and scientific cooperation among Parties		Global initiatives and partnerships		Capacity building support	
	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
Target 1: <i>By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</i>			<p>Multiple regional and national publications, e.g., http://cfs.nrcan.gc.ca/publications http://cfs.nrcan.gc.ca/pages/64</p> <p>Statistics Canada's Households and the Environment Survey provides data on the percentage of Canadians who report that they take definite action to protect the environment. Other data sources include volunteer-based bird surveys, including eBird (a checklist program), Christmas Bird Counts, Breeding Bird Survey, Breeding Bird Atlases, Project FeederWatch, and Project NestWatch.</p>							
Target 2: <i>By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.</i>			<p>Statistics Canada currently measures some stocks and flows related to natural capital in physical terms and, where feasible and appropriate, in monetary terms. Their system of resource and environmental accounts provide a framework through which ecosystem services could be accounted.</p>							

¹ More information on the Aichi Targets is available at: <http://www.cbd.int/sp/targets/>

Aichi Targets ¹	CBD Tools and guidance		National target setting, monitoring and assessment		Technical and scientific cooperation among Parties		Global initiatives and partnerships		Capacity building support	
	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.										
Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to										

Aichi Targets ¹	CBD Tools and guidance		National target setting, monitoring and assessment		Technical and scientific cooperation among Parties		Global initiatives and partnerships		Capacity building support	
	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
<i>achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</i>										
Target 5: <i>By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.</i>			Deforestation rate in Canada is <0.3% - i.e. already met target The North American Waterfowl Management Plan, working with private landowners and governments, has reduced the rate of loss and degradation of wetland and upland habitat since 1986 by protecting them, establishing conservation agreements, and influencing stewardship activities of landowners, farmers, land managers and conservation agencies. Ducks Unlimited Canada is leading the development of a Canadian Wetlands Inventory and Environment Canada is developing the Wetlands Indicator under the Canadian Environmental Sustainability Indicators (CESI) initiative.	monitored nationally						
Target 6: <i>By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so</i>			The Sustainable Fisheries Framework and its policies and tools (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm). The Fisheries Checklist is a key tool for reporting on progress against this target. There is no link for the Fisheries Checklist as it is an internal survey tool. The Department of Fisheries and Oceans reports publicly on two performance indicators using results collected with the Fisheries Checklist. For species at risk (SAR), domestic information is derived from:							

Aichi Targets ¹	CBD Tools and guidance		National target setting, monitoring and assessment		Technical and scientific cooperation among Parties		Global initiatives and partnerships		Capacity building support	
	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
<i>that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.</i>			<ul style="list-style-type: none">- population surveys, CPUE, stock assessment (http://www.isdm-gdsi.gc.ca/csas-sccs/applications/publications/index-eng.asp#SAR)- COSEWIC assessment (www.cosewic.gc.ca)- Recovery Potential assessment (http://www.isdm-gdsi.gc.ca/csas-sccs/applications/publications/index-eng.asp#SAR)- Determination of recovery or management objectives in SARA planning documents (http://www.registrelep.gc.ca/) (once a species is listed under SARA)- 5- year reporting requirements (http://www.registrelep.gc.ca/)- The FSDS indicator pertaining to SAR (http://www.ec.gc.ca/dd-sd/default.asp?lang=En&n=204102EE-1) <p>The Canadian Environmental Sustainability Indicators (CESI) include indicators for fisheries. http://www.ec.gc.ca/indicateurs-indicators/</p>							
Target 7: <i>By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.</i>			<ul style="list-style-type: none">• Sub-national policies and planning; forest certification; national policies.• Agri-Environmental Indicator Report Series <p>Global Aquaculture Alliance Best Aquaculture Practices: http://www.gaalliance.org/bap/standards.php</p> <p>GlobalGAP Aquaculture Standard: http://www.globalgap.org/uk_en/producers/aquaculture/</p> <p>Seafood Trust Certified Quality Standard: http://www.gtcert.com/seafood_trust/</p> <p>Aquaculture Stewardship Council: http://www.asc-aqua.org/</p> <p>Canadian Organic Aquaculture Standard: http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/publications/nouvelles-news/biologique-organic-</p>							

Aichi Targets ¹	CBD Tools and guidance		National target setting, monitoring and assessment		Technical and scientific cooperation among Parties		Global initiatives and partnerships		Capacity building support	
	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
			eng.html Aboriginal Principles for Sustainable Aquaculture: http://aboriginalaquaculture.com/aboriginal-certification-aquaculture-association-salmon-fish-farms-shellfish Global Reporting Initiative: https://www.globalreporting.org/reporting/latest-guidelines/g3-guidelines/Pages/default.aspx Aquaculture Sustainability Report: http://www.dfo-mpo.gc.ca/aquaculture/lib-bib/asri-irda/asri-irda-2012-eng.htm National Aquaculture Strategic Plan Initiative: http://www.dfo-mpo.gc.ca/aquaculture/lib-bib/nasapi-inpasa/index-eng.htm DFO Science advice: www.dfo-mpo.gc.ca/csas-sccs/index-eng.htm DFO Aquaculture Regulatory Research: http://www.dfo-mpo.gc.ca/Science/enviro/aquaculture/parr-prra/types-eng.asp DFO Aquaculture Research: http://www.dfo-mpo.gc.ca/Science/enviro/aquaculture/acrdp-pcrda/index-eng.htm DFO Integrated Multi-trophic Aquaculture research: http://www.mar.dfo-mpo.gc.ca/e0012208 Canadian Census of Agriculture and Environment Farm Plans 2011 Census of Agriculture							
Target 8: By 2020, pollution, including from excess nutrients, has been brought to			The Canadian Environmental Sustainability Indicators (CESI) include indicators on phosphorus concentrations. http://www.ec.gc.ca/indicateurs-indicators/							

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	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
<i>levels that are not detrimental to ecosystem function and biodiversity.</i>										
Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.			<p>Canada's Invasive Alien Species (IAS) policy and management framework is focused on prevention, monitoring and response to priority species and priority pathways of human-assisted introduction. Aim is to improve capacity to identify (and therefore assess) risks associated with unintentional pathways of introduction.</p> <p>Canada's National Strategy for IAS in general, forest-specific pest strategies, dedicated IAS Centres of expertise efficiently identify best areas for cooperation and capacity enhancement among stakeholders. An Invasive Alien Species Strategy for Canada</p> <p>The Canadian Environmental Sustainability Indicators (CESI) include indicators on IAS. http://www.ec.gc.ca/indicateurs-indicators/</p>	<p>Due to the increasing scale and volume of globalized trade, developing capacity to monitor all priority pathways and provide long-term responses to established Forest IAS remains a challenge.</p> <p>Operational support and uptake capacity at all levels from community to federal is unequal, which impedes exchange of information and best practices.</p>	<p>Multi-lateral agreement technical working groups (North American Plant Protection Organization - NAPPO, North American Forest Commission - NAFC) are in place and work well</p>	<p>Capacity to share, exchange high-risk pathway data in real time requires increasing.</p>				
Target 10: By 2015, the multiple anthropogenic			<p>Canadian Healthy Oceans Network CHON</p>							

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<i>pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.</i>										
Target 11: <i>By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and</i>			<p>Canadian Council on Ecological Areas (CCEA) is going to track main elements of this target for Canada through the Conservation Areas Reporting and Tracking System (CARTS), with supplemental information from other sources as needed.</p> <p>National Land and Water Information System</p> <p>DFO's "Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas", http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/benthic-eng.htm, sets out how fisheries are to be managed to address any impacts on sensitive benthic areas, species or communities. The policy is one of DFO's Sustainable Fisheries Framework policies. See below.</p> <p>DFO has mapped sites that play an important role in contributing to the conservation of ocean bottom (benthic) species, habitats and biodiversity: http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/benthiprot-eng.htm. The science processes supporting this mapping were conducted taking into account the size of the targets for which the commitment was made.</p> <p>The information on the fisheries closures comes from individual integrated fishery management plans (IFMPs). Many (but not all) of the IFMPs are found at: http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/index-eng.htm. Many but not all fisheries closures</p>				<p>World Database on Protected Areas WDPA</p> <p>World Conservation Monitoring Centre WCMC</p> <p>IUCN (WCPA)</p>		BIOPAMA	

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integrated into the wider landscapes and seascapes.			<p>have been considered to have biodiversity objectives and may contribute to this target. Planning for future fishery closures will give more explicit attention to potential biodiversity benefits of potential sizes and configurations of new fishery closures.</p> <p>Domestic science advice to support the above target has been provided both nationally and regionally. National science advice has included general guidance and the development of frameworks to ensure that MPA and MPA network implementation is conducted in a consistent manner (see links below). Advice specific to the establishment of MPAs has been provided at the regional level including Ecosystem Assessment Overview Reports, identification of EBSAs, identification of indicators and development of monitoring protocols and strategies specific to existing MPAs</p> <p>National Science Advice:</p> <p>Identification of Ecologically and Biologically Significant Areas: http://www.dfo-mpo.gc.ca/csas/Csas/status/2004/ESR2004_006_e.pdf</p> <p>Ecologically and Biologically Significant Areas: Lessons Learned: http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2011/2011_049-eng.pdf</p> <p>Framework and Principles for the Biogeographic Classification of Canadian Marine Areas: http://www.dfo-mpo.gc.ca/CSAS/Csas/Publications/SAR-AS/2009/2009_056_e.pdf</p> <p>Science Guidance on the Development of Networks of Marine Protected Areas (MPAs): http://www.dfo-mpo.gc.ca/CSAS/Csas/Publications/SAR-AS/2009/2009_061_e.pdf</p> <p>Examples of Canadian regional applications: Various examples of Canadian regional applications can be found in the following website: http://www.dfo-mpo.gc.ca/csas-sccs/</p>							

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Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.			<p>The <i>Accord for the Protection of Species at Risk</i>, which commits Canada's federal, provincial and territorial governments to a common approach to protecting species at risk, the <i>Species at Risk Act</i> (SARA) and activities under programs such as the <i>Habitat Stewardship Program for Species at Risk</i> are key components of a Canadian strategy for the protection of wildlife species at risk. All provinces and territories have species at risk or wildlife legislation that mandates the protection of species and habitat. Canada's approach aims to prevent wildlife species from becoming extinct by securing the necessary actions for their recovery, while managing other species to prevent them from becoming at risk.</p> <p>The Canadian Environmental Sustainability Indicators (CESI) include indicators on species at risk. http://www.ec.gc.ca/indicateurs-indicators/</p>							
Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion					Barcode of Life Barcode of Life					

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	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
<i>and safeguarding their genetic diversity.</i>										
Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	Genome Canada Genome Canada						Circumpolar Biodiversity Monitoring Program CBMP			
Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of			Efforts to assess and monitor ocean acidification are being undertaken by various academic organizations and non-government organizations. Under its Aquatic Climate Change Adaptation Services Program (ACCASP), Fisheries and Oceans Canada is conducting a series of aquatic basin scale assessments that, among other things, will consider both ecosystem and socio-economic climate impacts, with obvious implications for biodiversity. Through the Climate Change Adaptation Program (CCAP), Aboriginal Affairs and Northern Development Canada is supporting Aboriginal and northern communities to address risks and challenges posed by climate change impacts to become more resilient. The Canadian Forest Service's Forest Change Initiative, when complete, will include a Tracking System to							

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	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
<i>degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.</i>			enable reporting on the effects of climate change on Canada's forests; a sustainable forest management Adaptation Toolkit composed of a range of knowledge products (e.g. maps, guidebooks, decision-support systems, etc.); and an Integrated Assessment of the implications of climate change on Canada's forests and forest sector. The Canadian Council of Forest Ministers Climate Change Task Force is developing a suite of adaptation tools and guidebooks. Natural Resources Canada is developing an update to the National Assessment of Climate Change Impacts and Adaptation.							
Target 16: <i>By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.</i>			Canada recognizes the important role that access and benefit sharing plays in the CBD. Implementation of the Nagoya Protocol in Canada is complicated by the need to coordinate among various federal departments, involve provinces, territories, and aboriginal communities in discussions and consult with key stakeholders. Canada is currently working to better understand what implementation of the Nagoya Protocol in Canada would entail, and hopes to be able to make a clearer determination on whether or not it will accede to the Protocol within a year.							
Target 17: <i>By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national</i>			A national Forest Biodiversity Action Plan was completed in 1997. In 2006 the federal/provincial/territorial governments developed a Biodiversity Outcomes Framework as an action oriented companion to the Canadian Biodiversity Strategy. The first action implemented in this was the assessment – Canadian Biodiversity: Ecosystem Status and Trends 2010. The Canada Nature Survey, which assesses the value of nature to Canadians, is a second initiative under the Biodiversity Outcomes Framework which is just being completed.							

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	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps	Existing	Gaps
<i>biodiversity strategy and action plan.</i>										
Target 18: <i>By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.</i>	Traditional knowledge is used to develop conservation measures for species of significance to indigenous people, to assess potential impacts of development on local wildlife populations and ecosystems and to identify species at risk and develop recovery plans under Canada's Species at Risk Act ,									
Target 19: <i>By 2020,</i>			<ul style="list-style-type: none"> National forest research program at CFS continues, but efforts on biodiversity have 	Completion of a national			Arctic Biodiversity		CFS provides	

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<i>knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</i>			<p>declined; strong and sustained effort in Quebec only. Other provinces apply knowledge as it becomes available, often relating to priority forest species. Two provinces have biodiversity monitoring programs.</p> <ul style="list-style-type: none"> • Canadian Biodiversity: Ecosystem Status&Trends Report 2010; • Alberta Biodiversity Monitoring Institute ABMI; • Genome British Columbia http://genomebc.ca/ 	assessment of biodiversity science required to address policy needs			Trends 2010 ABT 2010 ; Barcode of Life barcodeoflife		national science for SFM	
Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes										

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	<i>Existing</i>	<i>Gaps</i>	<i>Existing</i>	<i>Gaps</i>	<i>Existing</i>	<i>Gaps</i>	<i>Existing</i>	<i>Gaps</i>	<i>Existing</i>	<i>Gaps</i>
<i>contingent to resource needs assessments to be developed and reported by Parties.</i>										