Council of
Ministers
of Education,
Canada

**Background — Developing a Pan-Canadian ESD
Framework for Collaboration and Action**

**Education for Sustainable Development Working Group
(ESDWG)**

January 12, 2010

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Introduction

> *[The] core values that underpin sustainable development — interdependence, empathy, equity, personal responsibility, and intergenerational justice — are the only foundation upon which any viable vision of a better world can possibly be constructed.*[1]

Sustainable development is an unprecedented challenge. Globally, we continue to face critical environmental, social, and economic challenges such as increased poverty, human-induced climate change, rapid depletion of our natural resources, spread of infectious diseases, violation of human rights, and so forth.[2] In order to match the scale of this challenge, a whole generation will need to be engaged to think and act in a way that enables responsible choices about our economies, our societies, and the environment.

The United Nations Decade of Education for Sustainable Development (ESD) 2005–2014, identifies education not only as a human right but also as a prerequisite for achieving sustainable development. Education is an essential tool for good governance, informed decision making and the promotion of democracy.[3] Education for sustainable development develops and strengthens the capacity of individuals, groups, communities, organizations, and countries to make judgments and choices in favour of sustainable development. It can promote a shift in people's mindsets and, in so doing, enable them to make our world safer, healthier, and more prosperous, thereby improving the quality of life. Education for sustainable development can provide critical reflection and greater awareness and empowerment so that new visions and concepts can be explored and new methods and tools developed.[4]

Canada has demonstrated significant leadership internationally on education for sustainable development. Provincial, territorial, and federal government departments and agencies, nongovernmental organizations (NGOs), and postsecondary institutions have all contributed to advancing the concept and practice of ESD. Canada is working within the framework and strategy developed by the United Nations Economic Commission for Europe (UNECE), and has adopted UNECE's ESD vision:

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[1] Porritt, J. (2005). *Capitalism—as if the world matters*. London: Earthscan, 384.
[2] UNESCO. (2009). *Review of Contexts and Structures for Education for Sustainable Development: Learning for a sustainable world,* 6.
[3] UNESCO. (2005). UNECE Strategy for Education for Sustainable Development, 1.
[4] UNESCO 2005, 1.

Our vision for the future is of a region that embraces common values of solidarity, equality, and mutual respect between people, countries, and generations. It is a region characterized by sustainable development, including economic vitality, justice, social cohesion, environmental protection, and the sustainable management of natural resources, so as to meet the needs of the present generation without compromising the ability of future generations to meet their needs.[5]

The purpose of this background paper is two-fold: to provide the international context for work on ESD in Canada and to lay out CMEC's commitment to ESD, in order to provide a rationale for the development of a pan-Canadian ESD Framework for Action and Collaboration.

Part One: International Education for Sustainable Development — Context

Origins of ESD

The report of the World Commission on Environment and Development (more commonly known as the Brundtland Report), published in 1987 under the title *Our Common Future*, noted the imbalance between developed and developing countries.

The Brundtland Report defined sustainable development as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs."[6]

Our Common Future called for increased literacy overall and reduced gaps between male and female primary-education enrolment rates. Linked to this concern for extending basic education globally was a prescient call for a new kind of education that foreshadows (without using the term) the concept of ESD:

Education should therefore provide comprehensive knowledge, encompassing and cutting across the social and natural sciences and the humanities, thus providing insights on the interaction between natural and human resources, between development and environment. (p. 113)

The concept of ESD was further developed in chapter 36 of *Agenda 21* (the outcome document of the UN Conference on Environment and Development 1992), entitled "Promoting Education, Public Awareness and Training."

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[5] UNESCO 2005, 1.
[6] World Commission on Environment and Development (WCED). (1987). *Our common future.* Oxford: Oxford University Press, 43.

Chapter 36 embraced a broad definition that included education offered in classrooms (formal education) and in non-school settings, such as workplaces and religious organizations (non-formal education), and the more general forms of communication (e.g., the mass media) that help shape public awareness and attitudes (informal education).

Even though the concept of ESD and its application have evolved over the past 17 years, many of the tenets set forth in *Agenda 21* have proved seminal. These key elements include:

- a broad definition that includes formal, non-formal, and informal education;
- the recognition that ESD "must take into consideration the local environmental, economic, and societal conditions";
- the definition of ESD as encompassing economic and social dimensions requires it to be broader than just environmental education;
- the insistence that ESD is education for (and not about) sustainable development;
- the notion of linking knowledge, values, perspectives, and skills/behaviour (the head, the heart, the hands);
- the recognition of the importance of Aboriginal and traditional knowledge;
- the importance of supportive education policy;
- the need for various forms of teacher training and professional development for education administrators and other key education decision makers.

UN Decade of ESD

UNESCO

In 2004, the UN declared 2005 to 2014 the UN Decade of Education for Sustainable Development (DESD).

The decade pursues a global vision of ESD as:

> The vision of education for sustainable development is a world where everyone has the opportunity to benefit from quality education and learn the values, behaviour, and lifestyles required for a sustainable future and for positive societal transformation.[7]

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[7] http://www.unece.org/env/esd/events.reg/UNESCO.JAN06.doc

This proclamation provided a renewed emphasis on ESD around the world, and sparked a number of important initiatives in Canada. UNESCO was assigned responsibility for implementation and reporting on chapter 36, and was subsequently nominated as the lead agency for DESD. UNESCO has played an active role in promoting ESD in all member states.

United Nations Economic Commission for Europe (UNECE)

In Vilnius, Lithuania, from March 17 to 18, 2005, Canada signalled its support for the Decade of ESD during the joint high-level meeting of ministers and other officials from education and environment ministries from across Europe and North America. The purpose of the meeting was to adopt the UNECE regional strategy,[8] the next milestone in the implementation process of the strategy.

The objectives of the UNECE regional strategy are to:

- ensure that policy, regulations, and operational frameworks support ESD
- promote ESD through formal, non-formal, and informal learning
- equip educators with the competence to include ESD in their teaching
- ensure that adequate tools and materials for ESD are accessible
- promote research on and development of ESD
- strengthen cooperation on ESD at all levels
- foster conservation, use, and promotion of the knowledge of indigenous peoples in ESD

The UNECE strategy provides member states with an implementation plan and a set of indicators to report progress toward meeting the objectives. CMEC, with the help of the Canadian Commission for UNESCO, agreed to take on the task of reporting to the UN on the implementation of the UNECE strategy.

Even though a common reporting framework has been devised, it is recognized that ESD will take many forms around the world, because it must take into consideration the *local* environmental, economic, and societal conditions.

Several member states have developed, or are in the process of developing, a national strategy for education for sustainable development that takes into account their country-specific situations.

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[8] http://www.unesco.org/env/documents/2005/cep/ac.13/cep.ac.13.2005.3.rev.1.e.pdf

2009 UNESCO World Conference on ESD

Most recently, CMEC and representatives of other bodies attended the UNESCO World Conference on Education for Sustainable Development in Bonn, Germany, from March 31 to April 2, 2009. The resulting declaration is available at http://www.esd-world-conference-2009.org/fileadmin/download/ESD2009_BonnDeclaration080409.pdf.

Part Two: Canadian Context

Defining ESD

In Canada, terms and definitions for education for sustainable development and related approaches, such as environmental education, vary among provinces and territories. In some jurisdictions, the term "environmental education" primarily addresses the scientific view of environmental issues, while in others, the definition is broader and includes a stronger link to the human and social dimensions of environmental issues, and is used in the same spirit as "education for sustainable development."

A recent report by UNESCO, entitled *Review of Contexts and Structures for Education for Sustainable Development 2009: Learning for a sustainable world,*[9] recognizes the value of these differences and states that, "these differences are important in ensuring that ESD develops in ways that are locally relevant and culturally appropriate. This means it is not necessary to seek consensus over the meaning of ESD but, rather, seek consensus around a range of key principles covering the scope, purpose, and practice of ESD."[10] That said, it is important to have a common basis of understanding when discussing ESD.

Education for sustainable development entails a reorienting of education to guide and motivate people to become responsible citizens of the planet. It addresses the interrelationships among the environment, the economy, and society. "ESD aims to help people to develop the attitudes, skills, and knowledge to make informed decisions for the benefit of themselves and others, now and in the future, and to act upon these."[11] ESD moves from students learning about sustainable development to students experiencing how to live sustainably. It therefore encourages linking ideas to action. ESD supports the acquisition of knowledge to understand our complex world and the development of interdisciplinary, critical-thinking, and action skills to address these challenges with sustainable solutions.

ESD also supports the values and perspectives necessary to participate in a democratic society, live sustainably, and pursue sustainable livelihoods. ESD identifies what citizens

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[9] http://www.unesco.org/education/justpublished_desd2009.pdf
[10] UNESCO 2009, 25.
[11] http://www.unesco.org/en/esd/. Accessed on January 12, 2010.

should know, be able to do, and value when they graduate from the formal school system about key sustainability issues such as climate change, energy, biodiversity, ecosystems, water, citizenship, transportation, and poverty. ESD is experiential, authentic, and action-oriented education, using real-world sources rather than relying exclusively on textbooks. ESD emphasizes information *analysis*, not just information transfer. ESD brings together elements from many curricular areas at the same time and integrates these through a sustainability lens, ensuring that students are able to address the key challenges we all face.

ESD requires changes in "how" teachers teach, not just "what" they are teaching. ESD also requires new methods of measuring and assessing student achievement that reflect these characteristics. An examination of ESD pedagogy suggests that the characteristics of ESD are central to good teaching in any context and consistent with a number of education-reform initiatives under way globally.

Canadian Milestones

Canada's progress in ESD is based on two decades of commitment by governments, NGOs, and postsecondary institutions, leading to the following notable milestones:

1988	The National Round Table on the Environment and the Economy was established. One of its first tasks was to establish a Task Force on Education, with a strong orientation to including young people more directly in decision making.
1991	The organization Learning for a Sustainable Future (LSF) was established, with a mandate to incorporate sustainable development into education policy across all provinces and territories. The LSF strategy has focused on advancing ESD policy in Canada, supporting educators and young people through workshops and resources, and working with teachers and business and community organizations to facilitate sustainability action projects.
1991	The Halifax Declaration committed Canadian university leadership to addressing sustainable development within academic teaching and research, and across the operations of universities.
1992	ECO-ED: World Congress for Education and Communication on Environment and Development, Toronto: a major international event in which thousands participated in knowledge exchanges about new directions for sustainability education
1993	ECO-ED led to the creation of the Canadian Network for Environmental Education and Communication.

1993	The *Établissements Verts Brundtland* movement begins; over 900 institutions currently participate in Quebec.
1997	The international francophone forum "*Planet'ERE de l'Éducation relative à l'environnement dans une perspective de développement durable*" took place in Montreal.
2000	CMEC published its foundation report, *Educating for Sustainability: The Status of Sustainable Development Education in Canada*, under the leadership of Manitoba Education, Training and Youth.
2005, 2006	Learning for a Sustainable Future, Manitoba Education, and Environment Canada initiated a Canada-wide program of work on the decade, encouraging the formation of multi-stakeholder ESD working groups in each province. This led to the establishment of ESD Canada, a council of ESD experts hosted by LSF.
2005	CMEC is represented on the UNECE Steering Committee on Education for Sustainable Development.
2006	CMEC publishes the document *United Nations Decade of Education for Sustainable Development (2005–14): Canada's Response to the UNESCO Questionnaire.*
2007	CMEC publishes the *Report to UNECE and UNESCO on Indicators of Education for Sustainable Development: Report for Canada.*
2008	CMEC releases *Learn Canada 2020*, with ESD as a core activity.
2008	CMEC established the Education for Sustainable Development Working Group (ESDWG).
2009	The 5th World Environmental Education Congress, held in Montreal, gave nearly 2,200 stakeholders from 106 countries the opportunity to join forces in exploring new ways by which we can live more sustainably.
2009	CMEC is represented on the UNECE Expert Group on Competences in Education for Sustainable Development.

The UNECE Strategy for Education for Sustainable Development and the UN Decade of Education for Sustainable Development are having an impact in Canada as they have been used to inspire, guide, and expand efforts on education for sustainable development.

CMEC's Commitment to ESD

To help deepen Canada's response to the DESD, provinces and territories, through CMEC, have assumed their central role in the implementation of ESD across Canada. In particular, in 2008, ministers issued a joint declaration, *Learn Canada 2020,*[12] in which ministers agreed to a common framework to enhance Canada's education systems. *Learn Canada 2020* sets out four pillars of lifelong learning and eight specific activity areas. One of these activity areas is education for sustainable development, to raise students' awareness and encourage them to become actively engaged in working for a sustainable society. With the *Learn Canada 2020* framework in place, in September 2008, deputy ministers of education approved the CMEC Statement on Education for Sustainable Development. Internationally, CMEC is represented on the UNECE ESD steering committee and on the UNECE Expert Group on Competences in ESD.

In 2008, CMEC established the Education for Sustainable Development Working Group (ESDWG) to act on the commitments made in the CMEC Statement on Education for Sustainable Development and the *Learn Canada 2020* declaration. The first major task for ESDWG is to establish a CMEC pan-Canadian ESD Framework for Collaboration and Action.

As lead province for CMEC's work in ESD, Manitoba provided the following four objectives for ESDWG in a recent presentation made to CMEC:
1. coordinate action that will support and strengthen the implementation of ESD in all provinces and territories;
2. develop a pan-Canadian ESD Framework for Collaboration and Action that builds on what jurisdictions are already doing and allows for information sharing and collaboration at the CMEC level;
3. establish a pan-Canadian ESD working group to work toward the development of an ESD Framework for Collaboration and Action and monitor progress;
4. provide financial support to UNECE to implement Phase II of the UNECE Strategy for Education for Sustainable Development.

Priorities and Actions of the CMEC ESDWG

The CMEC ESDWG is made up of representatives from all provinces and one territory. The overarching goal of ESDWG is to share information in order to find ways to work together. The four priority areas for the working group, focused on the K–12 level, are outlined below. Since the fall of 2008, the working group has met via teleconference, in-person meetings, e-mails, and a Wiki page in order to explore best practices and gaps in

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[12] http://www.cmec.ca/Publications/Lists/Publications/Attachments/187/CMEC-2020-DECLARATION.en.pdf

information, distill regional and jurisdictional differences in approaches, and establish definitions.

A table of pan-Canadian current activities in ESD was developed and completed by each jurisdiction to document existing ESD initiatives in each of the four priority areas. The appendix contains a summary version of this information. The activities table will assist in the development of the eventual creation of a pan-Canadian ESD Framework for Collaboration and Action.

1. **The integration of sustainable-development concepts into curricula**

The fundamental principle that must inform ESD curriculum is integration. ESD learning outcomes connect to each and every discipline and subject. The following are some examples:

- Mathematics helps students understand extremely small numbers (e.g., parts per hundred, thousand, or million), which allows them to interpret pollution data.
- Language arts, especially media literacy, creates knowledgeable consumers who can analyze the messages of corporate advertisers and see beyond "green wash."
- History teaches the concept of global change, while helping students to recognize that change has occurred for centuries.
- Social studies help students to understand ethnocentrism, racism, and gender inequity, as well as recognize how these are expressed in the surrounding community and nations worldwide.

Curriculum undergoes periodic review in all educational jurisdictions in Canada. Various examples of integrating ESD into provincial and territorial curricula are outlined in the *Report to UNECE and UNESCO on Indicators of Education for Sustainable Development: Report for Canada*, which can be found at http://www.lsf-lst.ca/media/FINALCanadaESD ReportOct2007ApprovedEN_000.pdf.

Although it is only one component of education systems, curriculum policy has a system-wide impact. Changing curriculum policy affects resource allocation, teacher training, and the development of teaching/learning resources, such as textbooks.

2. **The provision of ESD-related pre-service and in-service teacher education and support**

One of the greatest challenges in reorienting education systems to address ESD is the need to support educators. Canada's 350,000 teachers require effective instructional methods for implementing ESD. It is recognized that much of what needs to be taught is already in the curriculum (though not identified explicitly as part of ESD) and that all teachers can contribute to sustainability education once they are made aware of sustainability issues and perspectives.

Professional-development opportunities are ideally provided through both in-service and pre-service training. For many jurisdictions, at the pre-service stage, ESD has yet to be included as a core component of teacher-education programs. Professional development related to ESD at the in-service stage is more widely offered.

Most schools emphasize subject-based organization of learning. ESD asks educators to expand beyond subject disciplines to interdisciplinary or issues-based approaches to learning. Education research supports the use of such a comprehensive approach to learning and teaching. Teachers need to be trained and supported in these different pedagogical approaches.

3. **The development of ESD-related teaching resources and materials**

In addition to pre- and in-service training, teachers need ESD tools, materials, and resources that connect with provincially mandated curricula. They will benefit from examples of good practices, as well as from having the time and tools to share their experiences and learn from their colleagues.

Individual jurisdictions are creating resources to support ESD initiatives. The majority of jurisdictions have produced several Web-based resources for integrating various aspects of ESD into all classrooms.

One of the goals of the CMEC ESDWG is to collect and share the various best practices that are emerging across the country.

4. **Implementing and assessing ESD programs at the school and school-district/board/division level**

ESD is a comprehensive, integrative framework ideally suited to a whole-system approach. Rather than piecemeal, unconnected initiatives in curriculum, resources, or

teacher training, best results will follow from engaging entire boards and school districts in systematic, inclusive, and participatory approaches that reflect key principles.

Individual jurisdictions have reported that school divisions and boards vary in terms of their incorporation of ESD into policies, facilities, programs, and activities. Some are embracing the whole-system approach to sustainability, while others are undertaking individual activities related to ESD, ranging from recycling programs to community revitalization to initiating social-justice awareness.

Conclusion

Midway through the decade, Canada has made progress toward achieving ESD, demonstrated through:

- its involvement in ESD at the international level;
- an enhanced profile of ESD within Canada;
- an increasing role in implementing ESD at the K–12 level by provincial and territorial departments and ministries of education; and
- an increasing diversity of ESD providers, which now includes government, businesses, NGOs, community groups, etc.

At the end of the decade, it is critical that we have informed, skilled, and involved citizens who are able to understand and respond effectively and responsibly to complex issues.

Although Canada has made progress toward achieving ESD, the magnitude of this challenge requires an increasingly comprehensive approach, which necessitates coordinated action among and within jurisdictions. Within CMEC, developing a pan-Canadian ESD Framework for Collaboration and Action, outlining ESDWG priorities and actions at the K–12 level, is a key next step. The pan-Canadian ESD Framework for Collaboration and Action will set a course for coordinating action for ESD. The framework will allow provinces and territories to identify areas of potential cooperation, and to opt in or opt out, based on individual jurisdictional priorities.

The ESD Framework for Collaboration and Action will be developed and tabled for approval by deputy ministers in the fall of 2010.

Further Reading

Bonn Declaration, UNESCO World Conference on Education for Sustainable Development, http://www.esd-world-conference-2009.org/fileadmin/download/ESD2009_BonnDeclaration080409.pdf

Environmental Education in Canada: An Overview for Grantmakers, http://www.cegn.org/English/home/documents/EEBrief_Eng.pdf

Report to UNECE and UNESCO on Indicators of Education for Sustainable Development: Report for Canada, http://www.cmec.ca/Publications/Lists/Publications/Attachments/104/Canada-Report-ESD-2007-10.en.pdf

Review of Contexts and Structures for Education for Sustainable Development 2009: Learning for a sustainable world, http://www.unesco.org/education/justpublished_desd2009.pdf

UNECE Strategy for Education for Sustainable Development, http://www.unece.org/env/documents/2005/cep/ac.13/cep.ac.13.2005.3.rev.1.e.pdf

Province	Curriculum	Professional Development	Resources	At the School and District/ Board Levels
British Columbia	• ESD is reflected in ministry policy documents • ESD outcomes found across curriculum and grade levels, with strong emphasis in social studies, science, and personal planning • Curriculum maps developed showing all learning outcomes related to environmental sustainability • Curriculum framework for sustainability content in local courses • Assessment of key ESD knowledge themes in Grades 10–12 provincial exams	• ESD is an optional module offered as part of pre-service teacher-training programs • ESD-related workshops take place at individual district and provincial PD teacher conferences • Regional Centre of Expertise in ESD status from United Nations University Institute	• Learning resources are viewed with the lens of ESD as part of the normal resource-evaluation process • BC has produced several Web resources for integrating various aspects of ESD into all classrooms • Created a BC 'Green Schools' Web site for educators • BC promotes use of Resources for Rethinking Database	• Many school districts embrace the whole-school-system approach to sustainability • Schools and districts are supported by partnership programs offered by BC Hydro, Destination Conservation, Green Learning, and others • All boards in BC have signed the provincial Climate Action Charter, which commits them to taking actions around GHG reduction and other sustainability issues • Ministry and many districts promote student leadership in the area of environmental stewardship
Alberta	• Alberta's K–12 programs of study are developed in alignment with the Student Learning Outcomes in Ministerial Order No. 004/98. • Knowledge, skill, and attitude outcomes that support education for the environment and sustainable development are	• Students and practising teachers may access courses specifically related to key knowledge themes in ESD at the University of Alberta, the University of Calgary, and the University of Lethbridge. • The University of Alberta is developing a post-baccalaureate Diploma of Environmental and Sustainability Education program. • The Faculty of Education at the University of Alberta, in the	• LearnAlberta.ca provides educators access to on-line resources related to programs of study. • Several other provincial government departments and agencies develop ESD materials. • Materials relating to ESD outcomes in programs are authorized according to standard evaluation processes to ensure that resources meet specific criteria (curriculum congruency,	• School authorities approach ESD in a variety of ways (e.g., service projects, environmental and social justice groups, character and citizenship education, cultural-diversity initiatives). • School authorities address ESD through various policies and programs designed to increase infrastructure-energy efficiency; reduce carbon footprint and water consumption; address harassment, discrimination, poverty, and cultural

Province	Curriculum	Professional Development	Resources	At the School and District/ Board Levels
	integrated throughout programs of studies, particularly in science, social studies, health, career and technology studies (CTS), environmental and outdoor education, and locally developed courses. • First Nations, Métis, and Inuit perspectives pertaining to environment and sustainability are infused into programs of study. • A variety of classroom assessment methods are used to assess outcomes achieved, including those related to ESD. Upon course completion, provincial assessments are administered at Grades 6, 9, and 12 in social studies and science.	current program review for the undergraduate teacher-education program, is considering inclusion of principles of ESD in specific course development. • A variety of ESD professional-development opportunities are offered by organizations such as the Global, Environmental, and Outdoor Education Council, the Alberta Teacher's Association, and Inside Education.	instructional and technical design, recognizing diversity and promoting respect, Canadian content preference, Aboriginal content validation). • Print and digital learning and teaching resources are authorized as basic or support resources. Basic resources, and their associated instructional materials, available in English and French, and support resources, offered in either French or English, are accessed from the authorized learning and teaching resources database. • Resources are available for purchase from the Learning Resources Centre. • The Alberta Council for Environmental Education hosts a database of environmental-education resources in Alberta.	sensitivity; and support recycling and composting. • One Simple Act, led by Alberta Environment, and the Gen E program, led by Enmax Corporation support a whole-system approach to ESD, informing and engaging organizations and communities in decision making about waste, water, energy, and emerging renewable-energy technologies. • In-servicing of school-board officials is offered on ESD topics (social justice, cultural diversity, conservation, and sustainable infrastructure). Professional associations such as the Association of School Board Officials of Alberta provide some in-servicing. • Alberta ESD is supported through representation and funding from the Ministry of Education. The ministry also supports representation on the CMEC ESD Working Group.
Saskatchewan	• The goals of education for Saskatchewan, in particular "Membership in Society" and "Positive Lifestyle," address a number of aspects and themes related to ESD.	• ESD a big part of the University of Regina's and the University of Saskatchewan's teacher education. • In-service program provided by the ministry to support the renewed curriculum addresses the foundational statements that incorporate ESD principles into all	• The Ministry of Education identifies, evaluates, and recommends print, video, and electronic learning resources. These recommended resources are listed in core and additional-resources lists for each area of study. • There are no initiatives to	• All schools/school divisions engage in some type of activity related to ESD, ranging from recycling programs to community revitalization to initiating social justice awareness and action activities. These are often school-based, and are not necessarily coordinated within

Province	Curriculum	Professional Development	Resources	At the School and District/ Board Levels
	• The ministry has a number of policies that support ESD initiatives, particularly those related to social justice (e.g., multicultural education, gender equity, and the Aboriginal Education Provincial Advisory Committee Action Plan). • The renewed curriculum is focused on three broad areas of learning, one of which is "Building Engaged Citizens," and four cross-curricular competencies, one of which is "Developing Social Responsibilities." These foundations address the three tenets of ESD: environment, economics, and social justice; and will be incorporated into all curricula. ESD is strongly and explicitly addressed in science, social studies, health, English language arts, and arts-education curricula.	curricula. • There is some support for teachers available through the Saskatchewan ESD Network and the Regional Centre of Expertise (RCE) in Saskatchewan.	specifically identify or list resources related to ESD as a separate category of resources. • Various organizations produce and distribute resources, but efforts are not coordinated by the ministry.	school divisions. • School divisions are encouraged to be more environmentally friendly in all their decision making, particularly with new capital projects. • Many school divisions support student and teacher involvement in projects such as youth forums on sustainability. • The ministry is supporting a research project carried out through the University of Regina that will identify ESD activity being conducted at a school or school-division level. This information will be shared to inspire others to become more active and to enable schools and school divisions to learn from the experience of others.
Manitoba	• ESD is imbedded in	• The Sustainability and	• Created Manitoba ESD Web site,	• SEdA seminars delivered to assist

Province	Curriculum	Professional Development	Resources	At the School and District/ Board Levels
	K–12 curriculum. • Benchmarked sustainability outcomes in science, social studies, and phys. ed.-health ed. for K–10 • Developing new curriculum infused with ESD outcomes: 1. Interdisciplinary Middle Years Multimedia (IMYM) for Grades 4 and 7 2. Lake Winnipeg ESD courses for Grades 8 and 12 3. Developing a Global Citizenship and Sustainability course for Grade 12 • Currently reviewing and developing technical vocational curriculum to make efforts to incorporate sustainable-development concepts and principles wherever appropriate.	Education Academy (SEdA) from York University has provided ESD education for senior administration from school divisions in MB in 2007, 2008, and Oct. 2009; follow-up sessions to share divisional action plans after each SEdA session. • Manitoba Education provides workshops to school divisions, educators, and pre-service educators on an ongoing basis. • Manitoba Education provides educators with Summer Institute sessions in August of each year. • Manitoba Education provides conferences for educators, e.g., Choose the Future. • Manitoba Education is currently working with faculties of education to incorporate ESD into teacher training.	with a variety of resources and information for educators, www.edu.gov.mb.ca/k12 • Developing ESD tool kit to provide educators with a template to develop cross-curricular learning experiences. • Developed a resource for curriculum developers, teachers, and administrators: Education for a Sustainable Future • Developed many partnerships with organizations to provide educators with grants, programs, and materials to enrich the curriculum (e.g., Manitoba Education and Manitoba Hydro have a partnership for ESD grants to schools)	school boards were very effective in developing a "whole institutional approach" to ESD; reinforced by post-SEdA follow-up sessions for sharing of divisional action plans • An ESD guide and kit will be developed for SEdA alumni to use for PD with their divisional staff. • Implemented the Eco-Globe Schools annual recognition program that recognizes Manitoba schools' involvement in a variety of activities that promote and integrate ESD • Many partnerships with government agencies and NGOs to support schools and school divisions to incorporate sustainability into facilities and operations, as well as curriculum initiatives • ESD categorical grants are provided to school divisions to support their efforts to incorporate ESD into all aspects of school-division and school activities, operations, and programming.
Ontario	• Embed environmental education (EE) expectations and opportunities in all grades and in all subjects of the Ontario curriculum, as appropriate.	• Integrate EE into subject-specific training activities related to the release of revised curriculum documents, including training aimed at new teachers. • Started dialogue with faculties of education to address EE in their pre-service curricula	• Develop, and update annually, the EE Scope and Sequence documents (elementary and secondary) to reflect current EE expectations and opportunities in all curriculum documents. • Support development of programs and resources (e.g.,	• For the 2009-10 school year, the ministry funded 9 Regional Environmental Education Lead (REEL) positions (6 EL, 3 FL) to: o support boards in revising or developing a board EE policy aligned with the provincial policy framework;

Province	Curriculum	Professional Development	Resources	At the School and District/ Board Levels
	• Ensure that the standards for environmental education in the curriculum are applied to curricula in all subjects and disciplines during the revision and development process. • Two new optional environmental-science courses for Grade 11 students were developed and are available.	• Summer workshops (Camp OTF, Canadian Ecology Centre) to help teachers incorporate EE policy and initiatives into their classroom practices in various subject areas • Principals' associations have developed Webinars and other electronic resources to support the implementation of the EE Policy Framework in schools.	Ontario EcoSchools, Ontario Agri-Food Education). • Share electronic resources developed at teachers' Summer Institutes. • Revision and expansion of Resources for Rethinking (R4R) Web-based teacher resources • Sponsorship of Envirothon Provincial championship (English- and French-language) • French-language Webcast describing EE to be available on ministry Web site in early 2010 • Funded Canadian Teachers' Federation to link their Green Street/*Ma rue verte* resources to Ontario's curriculum	o establish a network of EE contacts in all boards in the region, including student leaders; o develop and share a network of community partners who can assist schools and boards in accessing and enhancing resources that support teaching and learning about EE; and o develop a provincial and regional plan for building and sustaining EE leadership capacity. • Research and promote effective models for assisting school boards and schools in implementing initiatives for greening schools (e.g., energy conservation, green clean).
Nunavut	• Nunavut is in the process of developing its own curriculum based on Inuit Qaujimajatuqangiit (I.Q.) (Values, Principles, and Beliefs). This will be Nunavut-specific and locally relevant to the students of Nunavut. • During this process, there will be the opportunity to infuse ESD into the curriculum. Many	• All Nunavut Teachers Association Members have funds available to complete professional development. This includes one week of professional development each year. • While it is not mandatory to complete PD on a specific topic such as ESD, some members may choose to do so. • The challenge is that there are few or no workshops/conferences available. Most PD is completed on-line/distance. • No current mandate for the type of PD teachers need to take	• With the development of a new curriculum, new resources are being created as well. • More ESD resources are available from other departments: Environment; Culture, Language, Elders and Youth; etc. The Department of Education is providing resources with its new Language Arts Modules, including topics such as peace.	• No whole-system approach (I.Q. is the main focus for the school system, and these values/beliefs are linked with ESD) • New school buildings are being built. Some are LEED-compliant.

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	aspects of ESD are closely linked to I.Q. • The current curriculum does contain elements of ESD, especially in the sciences, social sciences, and language arts.			
Quebec	• The Quebec government adopted the *Sustainable Development Act* on April 19, 2006. • ESD is included in all K–12 curricula. Five curriculum areas are linked to ESD (health and well-being, guidance counselling and entrepreneurship, living together and citizenship, media, environment and consumer issues). • Social awareness and science and technology curricula have a particular focus on ESD. • In Secondary IV, successful completion of environmental science and technology curricula is required to obtain secondary-school diploma.	• University curricula are under revision in order to adapt initial teacher training to take into account curriculum areas. • School boards are responsible for in-service teacher training and are required to take into account curriculum areas. • The ministry trains and provides resources to school-board trainers. Interventions always involve one or more curriculum areas.	• Curriculum materials produced by publishers must include curriculum areas prior to approval by the ministry. • Several government agencies and NGOs produce course materials for schools. This material is provided to school boards, which can choose whether or not to use it. This material is not approved by the ministry.	• The *Plan d'accompagnement des commissions scolaires en matière de DD 2008-2011* (School Board SD Framework Plan 2008/2011), in place since March 2009, suggests that school boards voluntarily adopt an SD process for public disclosure. • Several school boards have already adopted SD plans. • Almost 1,000 schools are recognized as Brundtland Green Schools (BGS) in Quebec. These schools create projects that focus on the environment, peace, solidarity, and democracy. The BGS program was created by the *Centrale des syndicats du Québec (CSQ)*.

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New Brunswick	• ESD is reflected in the regional planning recommendations of the Self-Sufficiency Task Force. • ESD is reflected in the commitments of the NB Education Framework entitled "When Kids Come First" for curricula and school facilities. • ESD-related outcomes are embedded across curricula and grade levels, particularly in social studies, science, health, law, environmental science, world issues, and locally developed courses. • Co-op placements are made in ESD-related fields: social services, resources sector, social justice, and First Nations.	• ESD is supported by curricular PD offered by the Department of Education. • ESD and EE PD is offered to teachers by outside groups, with teacher attendance supported financially by the department. • For pre-service teachers at NB universities, opportunities for training in ESD and EE are limited to an optional course or two on related topics, such as environmental education, human rights, and Aboriginal education.	• ESD resources are available in various courses to support ESD-related outcomes embedded in curricula. • Information on a wide array of EE and ESD materials and opportunities available to NB teachers is provided through two on-line NB Department of Education sites: Greening our Schools and *Écoles Vertes*. • URL links and resources to support ESD-related outcomes in curricula are available to teachers through the department's High School Science portal site. • The department works with environmental and sustainability non-profit organizations to provide teacher support and produce additional ESD or EE materials for classroom use.	• Many schools are involved in whole-school sustainability projects and practices, including: recycling, composting, energy and water conservation, greening of school grounds, indoor and outdoor air-quality programs, environmental clubs, and participation in the SEEDS program. • Some districts provide extensive support for district-wide environmental initiatives. • The development of sustainable school facilities is supported by the Department of Education. • A provincial ESD group (part of a national initiative) has been in place for two years, which links teachers (with department support) and the Department of Education with industry, other government departments, Aboriginal groups, and non-profit environmental and sustainability organizations.
Nova Scotia	• ESD is reflected in several policy documents in Nova Scotia. ESD outcomes are addressed in various curricula at all grade levels. ESD permeates several subject areas. Science,	• The issues of sustainable development are part of the aims and purposes of public education and university curriculum in social studies and science education. • Universities noted that faculty are involved in research on teaching sustainable development both in Canada and in	• NS has a process for evaluating of all resources for schools. The Bias Evaluation Instrument and the Learning Resource Evaluation are the tools used to review all resources for NS schools. • ESD tools/materials are listed in Authorised Learning Resources, and available in English and	• Boards, schools, and the Department of Education work collaboratively on school facilities. • The Department of Education has provided support to various groups for ESD. • NS has begun the development of a whole-system approach to work collaboratively on school facilities

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	social studies, English language arts, health education, and technology education tend to have more outcomes related to ESD. Other subjects have ESD embedded in their outcomes. • Courses for career exploration for secondary schools include instruction in workplace readiness.	international contexts.	French.	and school actions.
Prince Edward Island	• There are currently a number of ESD-related outcomes in a variety of curricula at various levels. These existing ESD-related outcomes are being highlighted and identified in work being done in curriculum guides and with teachers during PD opportunities. • Some subject areas have recent curriculum in which ESD-related outcomes are found (e.g., science, social studies, and health). • Some curriculum currently in revision or development will have ESD-related outcomes explicitly constructed	• Teachers attending in-services receive information about ESD and how they can support the principles of ESD in the curriculum they are using. • Planning is under way to develop and offer 2010 Summer Institutes with ESD-related themes. • Discussions are taking place with members of the Faculty of Education at the University of Prince Edward Island (UPEI) to explore ways to support ESD in the various curricula and programs at that institution.	• One of the criteria used for the selection of resources to support new and revised curriculum is the ESD-related nature of the resource. • The department is providing leadership in the PEI Sustainability Network, a provincial ESD working group composed of government agencies and NGOs. Also, the department is providing leadership by working with an interdepartmental ESD working group of the government of PEI. One of the goals of working with these two groups is to identify ESD-related resources that can be reviewed and possibly used to support ESD in the provincial curriculum.	• The Senior Director of Learning and Early Childhood Development has informed the superintendents of PE school boards of ESD and opportunities to learn more about ESD (e.g., SEdA).

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	and embedded within the curriculum. For example: a) Design Technology 401A: Analyze the effects of design on society, culture, and the environment; b) Global Issues 621A: Demonstrate an understanding of the concept of sustainability. All curriculum guides, as of spring 2009, will reference ESD in the front matter.			
Newfoundland and Labrador	• Environmental and economic issues are addressed in skilled trades, science, and social studies. • Social-justice issues are addressed in religious education, social studies, language arts, and career exploration. • The social-studies curriculum is being revised and will treat sustainable development in a holistic fashion.	• No specific pre-service programs; science majors get some sustainable development in their methods course • School districts do not address ESD in PD events unless they align with the curriculum. • The Department of Education provides a Summer Environmental Institute that addresses ESD issues related to ecology and development.	• The protected-areas association has developed a resource package for K–12 social studies and science curriculum on biodiversity. • Resources and partnerships formed to support social studies • Programs to support ESD themes covered in religious-education programs • Memorial University student union is engaged in a variety of campus-based sustainable-development initiatives • Many NGOs offer a variety of resources related to SD (e.g., Conservation Corps. delivers programs on climate change).	• No formal programs in place to encourage ESD, other than energy saving • Districts engage in many cost-cutting measures related to energy. • Some districts have student environmental-education programs. • Many schools are involved in national programs, such as Green Street, as well as local programs offered by various NGOs. • Most schools participate in recycling programs, and some have composting programs.