

Education for Sustainable Development: Cure or Placebo?

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Abstract: *After tracing the origins of the concept of Education for Sustainable Development (ESD) in the Brundtland Report and Agenda 21, this paper provides an overview of ESD initiatives in Canada over the past 20 years, emphasizing Canada's response to the UN Decade for ESD (2005-2014). The paper concludes with a discussion of what steps are needed to make ESD more effective in preparing Canadians and others to meet 21st century sustainability challenges.*

Key Words: *Education for Sustainable Development (ESD); UNDESD; ESD in Canada; culture of sustainability.*

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Education for Sustainable Development: Cure or Placebo?¹

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Where Have We Been? The Emergence of the Concept of ESD

The “*Report of the World Commission on Environment and Development*” (more commonly known as the Brundtland Report, published under the title *Our Common Future*) was **a** – perhaps **the** – seminal document in the emergence of sustainable development discourse, policies and practices. Despite its comprehensive discussion of SD issues and challenges, the *Report* devotes relatively little attention to education. Noting the imbalance between developed and developing countries *Our Common Future* calls for increased literacy overall and reduced gaps between male and female primary education enrolment rates. Linked to this concern for extending basic education globally is a brief discussion of the importance of improved environmental education, and 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.²

Perhaps the most powerful statement in *Our Common Future* about the importance of education came from Gro Harlem Brundtland’s Foreword, where she underlined the importance of communicating a “message of urgency” to “parents and decision makers” in a language “that can reach the minds and hearts of people young and old.” Ultimately, she insisted, “The changes in attitudes, in social values, and in aspirations the report urges will depend on vast campaigns of education, debate, and public participation.”³

¹ I am grateful to Dr. Christina McDonald for comments on an earlier draft of this paper.

² *Our Common Future* p. 113. The Report notes the importance of teacher training to provide this new kind of education, calling it a “critical point of intervention.” (p. 114)

³ *Ibid* p. xiv

Our Common Future was officially a report to the United Nations, which responded by organizing UNCED: the United Nations Conference on Environment and Development held in Rio de Janeiro in June 1992. At UNCED the concept of SD was operationalized in a number of documents, the most comprehensive of which was *Agenda 21*. In the lead-up to UNCED many became convinced that if SD were to succeed it would require supportive education. Ultimately this resulted in the development of the concept of Education for Sustainable Development (ESD). Indeed the term education appears in every chapter of *Agenda 21* and is used throughout the document with less frequency only than the term government itself. More importantly, education was given its own chapter (Ch. 36) entitled “Promoting Education, Public Awareness and Training.”

The initial pressure to develop ESD came from outside the education community, from international organizations, from business, governments and NGO’s. To some members of the Chapter 36 writing team⁴, all that was needed was more emphasis on environmental and outdoor education. Others pointed out that in some parts of the world, formal education was available only to a minority of young people and often for very short periods of time. (In parts of Latin America and the Caribbean, for example, the average level of educational attainment is Grade 4. In parts of Africa it is measured in months.) Given this stark reality, Ch 36 begins by recommending “the preparation of national strategies and actions for meeting basic learning needs, universalizing access and promoting equity, broadening the means and scope of education, developing a supporting policy context, mobilizing resources and strengthening international cooperation to redress existing economic, social and gender disparities which interfere with

⁴The 10 individuals chosen to prepare a draft of chapter 36 included Canadian Chuck Hopkins, who at the time was a Superintendent for Curriculum with the Toronto School Board. After retiring from this position Chuck has continued to serve as a key senior ESD advisor to UNESCO, and in 1999 was appointed UNESCO/UNITWIN Chair in “Reorienting Teacher Education Toward Sustainability” at York University.

these aims.” Only after endorsing this plea for improved basic education (which arose from the World Conference on Education for All: Meeting Basic Learning Needs, Jomtien, Thailand, 5-9 March 1990) does the Chapter address the content of ESD by calling for “strategies aimed at integrating environment and development⁵ as a cross-cutting issue into education at all levels.”

Chapter 36 embraced a broad definition which included education offered in classrooms (**formal education**) as well as in non-school settings such as workplaces or religious organizations (**non-formal education**) and the more general forms of communication (e.g. through the mass media) that help shape public awareness and attitudes (**informal education**). In short, it identified 4 major thrusts to ESD:

1. improve basic education (especially in the developing countries)
2. reorient existing (formal) education to address SD
3. develop public understanding and awareness (informal education)
4. provide training for all sectors of society including business, industry and government (non-formal education).

Even though the concept of ESD and its application have evolved over the past 15 years, many of the tenets set forth in Agenda 21 have proved seminal. These key elements include:

- the broad definition noted above (formal, non-formal, informal)
- the recognition that ESD “must take into consideration the local environmental, economic, and societal conditions. As a result ESD will take many forms around the world.”⁶

⁵ One very noticeable change since 1992 is the move away from the rather narrow language of “environment and development” to the more comprehensive conceptualization of ESD as involving integrated, systems-based understanding of the interrelationships between the natural, social and economic dimensions of sustainability. The seeds for this broadening were present in Ch. 36 however, which spoke of connecting environment and development issues to “their socio-cultural and demographic aspects and linkages”.

⁶ “Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability” p. 70.

- the insistence that ESD is education for (not about) sustainable development.⁷
- the notion of linking knowledge, values, perspectives, and skills/behaviour (the head, the heart, the hands)
- recognition of the importance of aboriginal and traditional knowledge
- the importance of supportive educational policy
- the need for various forms of teacher training and professional development for educational administrators and other key education decision makers.

The imperative of teacher training might have posed huge obstacles to the efforts to promote ESD. How could resources be found to present entirely new content and pedagogy to the world's 55 million [now over 60 million] teachers? The response was a clever reframing and wise adoption of what was termed a "strengths approach". Instead of assuming that teachers' sustainability knowledge glass was basically empty, and extensive new training would be needed to remediate this deficiency, the strengths approach 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:

Rather than primarily retraining inservice teachers to teach sustainability, we need to design new approaches to pre-service and inservice teacher education to address Environment Economy Society.⁸

ESD learning objectives connect to each and every discipline and subject:

⁷ See further discussion of this point below. Chuck Hopkins is particularly adamant about avoiding the term "sustainability education". He has compiled a list of various forms of "adjectival education" (environmental, global, driver, health etc etc) that are constantly vying for inclusion on the curriculum. Sustainability education would be added to this list of over 80 others, forced to wait at the end of the line of never. ESD is not another topic to be added to the growing, unmanageable agenda for curriculum expansion; on the contrary it is a different approach to the entire curriculum, both explicit and "hidden". (The latter term refers to the various institutional practices followed in school which should be reformed to ensure that the school itself "models" sustainability practices.)

⁸ Rosalyn McKeown (with assistance from Charles Hopkins et al) *The ESD Toolkit* pp. 24 -25. This document provides an excellent overview of the origins and evolution of ESD, and contains useful advice about its application. It is available at <http://www.esdtoolkit.org>

No one discipline can or should claim ownership of ESD. In fact, ESD poses such broad and encompassing challenges that it requires contributions from many disciplines. For example, consider these disciplinary contributions to ESD:

- 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.
- Reading develops the ability to distinguish between fact and opinion and helps students become critical readers of political campaign literature.
- Social Studies helps students to understand ethnocentrism, racism, and gender inequity as well as to recognize how these are expressed in the surrounding community and nations worldwide.⁹

Chapter 36 outlined both deadlines for accomplishing its key recommendations and funding estimates to support them. However, as with other efforts to secure funding for Agenda 21, money was never forthcoming. Deadlines came and passed. But the impetus from Rio continued to energize and inspire ESD developments around the world.

ESD as a Process with a Purpose

Many sustainability theorists and practitioners agree that sustainable development is a process rather than an outcome – a process that features ongoing learning and “adaptive management.” Not surprisingly, similar views have been put forward about ESD.

We believe that education for sustainability is a process, which is relevant to all people and that, like sustainable development itself, it is a process rather than a fixed goal. It may precede – and it will always accompany – the building of relationships between individuals, groups and their environment. All people, we believe, are capable of being educators and learners in pursuit of sustainability. (Sterling/EDET Group 1992, p. 2)¹⁰

⁹ *Ibid.*

¹⁰ John Fien and Daniella Tilbury, “The Global Sustainability Challenge.” Ch 1 of Daniella Tilbury et al, eds. *Education and Sustainability: Responding to the Global Challenge*. IUCN, 2002. Available at <http://www.unece.org/env/esd/information/Publications%20IUCN/education.pdf>

But what purpose guides this process? This question has generated considerable controversy, largely focused on whether ESD is education *about* or *for* sustainable development.

An important distinction is the difference between education *about* sustainable development and education *for* sustainable development. The first is an awareness lesson or theoretical discussion. The second is the use of education as a tool to achieve sustainability.... While some people argue that “for” indicates indoctrination, we think “for” indicates a purpose. All education serves a purpose or society would not invest in it... ESD promises to make the world more livable for this and future generations. Of course, a few will abuse or distort ESD and turn it into indoctrination. This would be antithetical to the nature of ESD, which, in fact, calls for giving people knowledge and skills for lifelong learning to help them find new solutions to their environmental, economic, and social issues.¹¹

ESD in Canada

While the origins of ESD can be traced to *Agenda 21*¹², even before the Earth Summit and the adoption of *Agenda 21*, work had begun here in Canada to evolve the concept of ESD. These efforts resulted (indirectly) from the work of the Brundtland Commission which in 1986 had held a series of eight public hearings in Canada. The impact was profound. Canada’s response to the work of the Commission (whose secretary general was Canadian Jim MacNeill, with Maurice Strong a prominent member) included establishing (in 1987) a “National Task Force on the Environment and the Economy” (NTFEE) whose recommendations led (*inter alia*) to the later establishment at the national, provincial, and local levels, of “Round Tables on the Environment and the Economy”. Among the other fruits of Brundtland and NTFEE was the founding of IISD in Winnipeg, and the strong support for SD from the Government of

¹¹ McKeown *op. cit.* p. 7

¹² Of course ESD, like sustainability itself, has many precursors. In terms of UN antecedents of ESD none is more important than the conference on Environmental Education (co-sponsored by UNESCO and UNEP) held in Tblisi Georgia (USSR) in October 1977. Many of the elements of ESD are reflected in the Tblisi Declaration which emanated from the conference. (See Appendix B.)

Manitoba which had arguably the most effective provincial Round Table in Canada, and also the first SD Act, passed in 1997¹³.

It was the National Round Table which saw most acutely the need for changes to the education system in Canada. In 1991, NRTEE helped set up an NGO charged with the task of promoting sustainability education across the curriculum in elementary and secondary education in Canada. The first Chair of LSF was a former CEO of Shell Canada, Jack McLeod, who apparently was personally encouraged to take on this mission by Jim MacNeill. The founding Executive Director was Jean Perras. Unlike NRTEE, which had always received financial support from the federal government and later became more permanently established through an Act of Parliament, LSF from the outset was required to raise its own funding from a variety of sources including governments, businesses, and foundations.

Perras began his work by conducting consultations across the country with key education stakeholders in an effort to develop a consensus on the appropriate content and pedagogy for ESD. Both Hopkins and Perras were reminded that some of the key building blocks for ESD were already in place in such concepts as Environmental Education and Global Education. Indeed there were some who objected to ESD as either redundant or wrong-headed.¹⁴

The task of any Canadian national organization set up to promote

¹³ It is no coincidence that Manitoba is now playing a lead role in Canada's response to UNDES.

¹⁴ In her recent doctoral dissertation, Liza Ireland observes "Canadian environmental education scholars such as Jickling (1992, 2001) and Sauvé (1999b) have interpreted education for sustainability in narrow, instrumental terms and have criticized it, as 'sustainable development' is a contested term and education 'for' sustainable development can be interpreted as indoctrination. In light of this they have not adopted the new terminology of 'education for sustainability' or 'education for sustainable development' but have retained the term 'environmental education' seeing it as more appropriate." Elements of this controversy continue to flare up in print as well as at meetings and conferences. A full consensus among educators to support ESD may eventually emerge. In my view the controversy has not been helpful. ESD has been an evolving, deliberately inclusive concept which must in any event be adapted to different regions and changing SD challenges and opportunities.

educational objectives is complicated by the constitutional division of powers which (under Section 92) assigns full responsibility for (formal) education to the provincial governments. As a national organization working in an area of provincial responsibility, to be effective LSF would need to develop good working relationships with provincial ministries of education and related teacher and school board organizations. The LSF Board drew its membership from all regions of Canada, but as one might expect it had more success in some provinces than in others. In most instances LSF worked through loose alliances or partnerships, but Ontario followed a different path. With support from the Ontario Round Table on the Environment and the Economy (ORTEE), various Ontario ministries, NRTEE, and with guidance from LSF, the Ontario Learning for Sustainability Partnership (OLSP) was established in 1994 to promote ESD across the province. The initiative was very nearly stillborn when the election in June 1995 brought to power the Mike Harris conservatives. Within weeks the Premier's Council and ORTEE were disbanded, thus removing the principal institutional supports for OLSP. (The Harris conservatives followed this move up a year later by taking environmental education out of the Ontario curriculum.) OLSP managed to survive, however, and soon strengthened its institutional links to LSF, renaming itself LSF-O. Several years later, after Jean Perras had stepped down as Executive Director, the 2 organizations merged and the executive director of LSF-O, Pam Schwartzberg, was appointed to head the national organization.

The LSF strategy has focused on advancing (ESD) policy in Canada; supporting educators and youth through workshops and resources; and working with students, teachers, business and community organizations to facilitate sustainability action projects. This latter strategy has been accomplished primarily through a series of Youth Taking Action Forums which were pioneered in Ontario but now have been held in all regions of Canada.

Learning for a Sustainable Future (LSF) (www.lsf-lst.ca)

Our Mission

LSF's mission is to promote, through education, the knowledge, skills, perspectives and practices essential to a sustainable future.

Our Vision

LSF envisions citizens acquiring, through education, the knowledge, skills, perspectives and practices needed to contribute to the development of a socially, environmentally, and economically sustainable society not only for today but for generations to come.

Our Approach

LSF's approach is to work together with educators, students, parents, government, community and business to integrate the concepts and principles of sustainable development into education policy, school curricula, teacher education and lifelong learning across

As a follow-on to Rio and Agenda 21, in October 1992, Chuck Hopkins organized a huge "Eco-ED" conference in Toronto which attracted nearly 6000 delegates (including more than 500 aboriginal delegates) from all parts of the world. The heads of six UN agencies attended, and each panel featured a participant from government or education, a business representative, an aboriginal person, and at least one woman.

Whereas Hopkins has worked primarily with UNESCO (and later with UNU), Perras was strongly linked to IUCN.¹⁵ Both groups co-sponsored a second large international Conference on ESD in Thessaloniki in 1997. Hopkins convened a

¹⁵ The group within IUCN that oversees its involvement in ESD is called the Commission on Education and Communication (CEC). IUCN's website contains the following statements about ESD: "The Commission is taking part in a global effort to integrate the principles of sustainable development into all aspects of education and learning. It's called Education for Sustainable Development (ESD). ESD focuses on how people live, work and make decisions. All ESD efforts share a common concern for a sustainable future, employing a wide variety of methods that engage people in problem-solving and advance positive change."
(<http://cec.wcln.org/index.php?module=pagesetter&func=viewpub&tid=11&pid=124>. Accessed 10/7/07.)

workshop on Teacher Education for Sustainability (TEFS) that brought together leading educators from a number of countries to strengthen TEFS globally, particularly in the developing countries. The Thessaloniki Declaration clarified the scope and reach of ESD by pointing out that:

“the concept of sustainability encompasses not only environment, but also poverty, population, health, food security, democracy, human rights and peace. Sustainability is, in the final analysis, a moral and ethical imperative in which cultural diversity and traditional knowledge need to be respected.”¹⁶

Many organizations have articulated the implications of this broad construction of sustainability for ESD. The following excerpt from a Quebec document is particularly eloquent:

Education for a sustainable future can therefore be seen as “a concept that is wider than the environment. It rejects durable development [i.e. SD], which is considered to be too vague. It also rejects the original concept of environmental education, which is seen as too narrowly linked to the natural environment. Education for a sustainable future seeks to integrate these two concepts into other, wider concepts: non-violence, peace, co-operation, human rights, democracy [...].

Whereas environmental education, as originally defined, remains committed to maintaining its close links with the environment, education for a sustainable future seeks, in contrast, to become a horizon for integrating other educational currents. This is clearly not a particular subject that should take a place alongside other subjects. Instead, it seems to fit into the field of transversal skills discussed in the education policy statement of the Ministère de l'Éducation (1997), while at the same time being open to a wide variety of educational subjects.”¹⁷

¹⁶ Thessaloniki Declaration. Cf. Fien and Tilbury (*op. cit.*): “Education with the objective of achieving sustainability varies from previous approaches to environmental education in that it focuses sharply on developing closer links among environmental quality, human equality, human rights and peace and their underlying political threads. Issues such as food security, poverty, sustainable tourism, urban quality, women, fair trade, green consumerism, ecological public health and waste management as well as those of climatic change, deforestation, land degradation, desertification, depletion of natural resources and loss of biodiversity are primary concerns for both environmental and development education. Matters of environmental quality and human development are central to education for sustainability....”

¹⁷ “*Educating and Acting for a Sustainable Future*” (nd) published by the CSQ. The quote in the passage is taken from André Beauchamp, “ENVIRO-SAGE, Vers un politique d’information, de sensibilisation et d’éducation à la gestion durable des matières résiduelles. Document de réflexion soumis à la société.” RECYC-Québec, January 1999, p. 21

Where are we now? UNDESSED and Canada's Response

In 2004, the UN declared 2005 – 2014 the UN Decade of Education for Sustainable Development (UNDESSED). In proclaiming the Decade, UNESCO identified its purpose as follows:

The goal of the United Nations Decade of Education for Sustainable Development (2005-2014, DESD), for which UNESCO is the lead agency, is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning.

This educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations.¹⁸

This proclamation provided a renewed emphasis on ESD around the world, and sparked a number of important initiatives here. Canada signaled its support for the Decade at a high-level meeting of Environment and Education Ministries in Vilnius on March 17 -18, 2005. The purpose of the meeting was to adopt the Economic Commission for Europe's (UNECE) Strategy and Implementation Framework for the Decade. Gerald Farthing, Deputy Minister, Manitoba Education, Citizenship and Youth led the Canadian Delegation with Suzan Bowser, Director General, Environment Canada¹⁹; Diane Rochon, Program Officer, Ministère de l'Éducation Québec²⁰; and David Walden, Secretary-General, Canadian Commission for UNESCO.

The UNECE Strategy encourages UNECE member States to develop and incorporate ESD into their formal education systems, in all relevant subjects, and in non- formal and informal education. The **aim** is to equip people with knowledge of and skills in sustainable development, making them more

¹⁸ As stated on the UNESCO website at http://portal.unesco.org/education/admin/ev.php?URL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201

¹⁹ DFAIT had responsibility initially for UNDESSED, but passed it on to EC within a few months.

²⁰ Although it participated in this key meeting, Quebec has so far declined an invitation to form a provincial working group and join NESDEC. Nevertheless as pointed out above Quebec has a number of strong ESD activities and programs in place, and did report on some of these activities by providing data to CMEC for inclusion in its report to UNECE.

competent and confident and increasing their opportunities for acting for a healthy and productive life in harmony with nature and with concerns for social values, gender equity and cultural diversity

The **objectives** of the UNECE 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 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. The Council of Ministers of Education of Canada (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 using this framework and indicators.²¹ Gerald Farthing (Manitoba DM) is serving as the CMEC lead on this project.

To help deepen Canada's response to UNDESD, in 2005 Learning for a Sustainable Future (LSF), initiated a three way partnership (federal government, provincial government, and NGO) to advance ESD in Canada. Partners include Environment Canada, Manitoba Education, Citizenship and Youth (MECY)/ Manitoba Advanced Education and Literacy (MAEL), and LSF. Together these 3

²¹ The first CMEC report was released in October 2007 under the title "Report to UNECE and UNESCO on Indicators of Education for Sustainable Development". In addition to reporting on progress toward achieving the objectives note above, countries were also asked to "Describe any challenges and obstacles encountered in the implementation of the strategy" and to "Describe any assistance needed to improve implementation."

Absent the activities around UNDESD, it is unlikely that CMEC would have had much if any formal involvement in ESD. In 1999, Manitoba tried unsuccessfully to encourage CMEC to develop an action plan for implementation of ESD in each jurisdiction. In June 2008, however, CMEC agreed to establish a Working Group on ESD that will be led by Manitoba.

organizations comprise a steering committee for an ambitious series of initiatives coordinated by LSF in support of the UNECE objectives:

1. Provincial/territorial Education for Sustainable Development Working Groups have been established to date in 8 jurisdictions in Canada
2. A National Education for Sustainable Development Expert Council (NESDEC) has been formed
3. The Canadian Sustainability Curriculum Review Initiative is in progress.
4. The ESD Resource Database (“Resources for Rethinking – R4R”) has been launched.
5. Youth Taking Action Forums (which include Teacher Professional Development Workshops) are being held in several locations across the country.

Following from the first of these initiatives Manitoba established a pilot ESD provincial working group in 2005. Similar groups have since been set up in BC, Alberta, Saskatchewan, Ontario, New Brunswick, Nova Scotia, and Nunavut. There is strong interest in PEI and Newfoundland, and ESD working groups in these provinces will get official status once additional funding is secured. Although Quebec has opted, to date, not to form a Working Group, there is a strong commitment to ESD flowing from the 2006 Sustainable Development Act (see text box below²²) and the work of the CSQ (Centrale des syndicats du Québec) which enthusiastically endorsed Education For Sustainability (EFS) in the 1990’s, and has given continuing support to the Ecoles Vertes Brundtland (Brundtland Green Schools) of which there are now over 900 in the province.

There was a strong consensus that educating for sustainability should begin very early in life. It is in the early childhood period that children develop their basic values, attitudes, skills, behaviours and habits, which may be long lasting. Studies have shown that racial stereotypes are learned early and that young children are able to pick up cultural messages about wealth and inequality. As early childhood education is about laying a sound intellectual, psychological, emotional, social and physical foundation for development and lifelong learning, it has an enormous potential in fostering values, attitudes, skills and behaviours that support sustainable development – e.g. wise use of resources, cultural diversity, gender equality and democracy.²³

²² Information in the text box was drawn in part from the CMEC Report (*op. cit*) p. 10 (item 24)

²³ *The Contribution of Early Childhood Education to a Sustainable Society*. Edited by

SD Initiatives in Quebec

Sustainable development is not a new idea within the Quebec government. Since the 1980's, action has been taken to raise awareness about the economic, environmental, and social principles and activities of living consistent with the idea of a sustainable future. In November 2004, the Ministry of the Environment released the *Québec Sustainable Development Plan, Consultation Document*. Over 3,500 people attended public hearings held in 21 municipalities across Quebec to discuss this document. Overall, the government received over 580 position papers and heard from more than 800 people. Following the consultations, changes were made to the draft legislation.

In 2006, the *Sustainable Development Act* came into force in Quebec to introduce a new management framework to the public service so that, when exercising its power and responsibilities, it integrates the principles of sustainable development. The Ministry of Sustainable Development, Environment and Parks is responsible for this Act, including its understanding, implementation, and the development of indicators to measure progress. The Quebec Ministry of Education, Recreation and Sports was involved in the development of the *Sustainable Development Plan* and is a member of the Inter-ministerial Committee on Sustainable Development, which ensures that government policy and practice are consistent with the principles of sustainable development and that the initiatives of the various departments, including those of education, are complementary.

In its first Sustainable Development Strategy (2008 – 2013) the Government of Quebec has identified 3 priority strategic directions which include as Direction 1 “Inform, make aware, educate, innovate.” Citing the global importance of the UN Decade for ESD, the Strategy documents states:

We must work even harder to make people aware of the concept of sustainable development, its imperatives and the environmental, social and economic challenges associated with it so that each member of society can help achieve it.

(*A Collective Commitment: Government Sustainable Development Strategy 2008 – 2013*. December 2007. Available at http://www.mddep.gouv.qc.ca/developpement/strategie_gouvernementale/strat_gouv_en.pdf)

Despite only minimal funding from the federal government (\$15k per year for 2006 - 2009, and a recent decision not to extend funding beyond March 2009) many of these working groups have been very active and remarkably successful, as evidenced by the summary in Appendix C.

A parallel, complementary initiative spearheaded by Chuck Hopkins has resulted in the establishment of a number of ESD “Regional Centres of Expertise” (RCE’s) in a number of jurisdictions. This initiative has its roots in one of the recommendations of Ch 36 of Agenda 21:

j) Countries, assisted by international organizations, non-governmental organizations and other sectors, could strengthen or establish national or **regional centres of excellence** [emphasis added] in interdisciplinary research and education in environmental and developmental sciences, law and the management of specific environmental problems. Such centres could be universities or existing networks in each country or region, promoting cooperative research and information sharing and dissemination. At the global level these functions should be performed by appropriate institutions;

RCE’s have been organized in a number of countries under the auspices of the United Nations University. Each RCE is a “network of existing formal, non-formal and informal education organizations, mobilized to deliver ESD to a regional community.” Here in Canada, RCE’s have been established in Saskatchewan, southern Ontario, and the Montreal region. Each RCE has a strong focus on research an affiliation with one or more local universities. Environment Canada has provided support for the development of the Canadian RCE’s.

Funding of ESD Initiatives:

In several UNECE countries, UNDESD activities have received substantial financial support from the national government. Not so in Canada. To be sure, the division of powers does complicate the ESD situation in Canada. But ESD extends beyond formal education, and federal funding of the strategic initiatives agreed to by the 3 partners (Manitoba, LSF, and EC) would not offend provincial sensibilities. Moreover many federal departments have as part of their core mandate “knowledge transfer” to the Canadian public (i.e. informal ESD). Furthermore, each federal department and key agency also has a Sustainable Development Strategy, one element of which typically involves public education; and each department is already (or should be in order to fulfill their SD commitments) engaged in non-formal SD education in the form of professional development and training of departmental employees.

Despite the clear link between ESD and the core mandate of nearly every department, the federal government has struggled to come up with the funds to support its international commitments to UNDESD. Soon after the UNDESD was announced, EC was given responsibility for this area by DFAIT. EC then entered the partnership with Manitoba and LSF outlined above, using the mechanism of a “grants and contributions agreement” with LSF to provide some funding for the agreed upon initiatives. But the total for the first 2 years was \$375k, an amount that was subsequently cut nearly in half for the 2007. A commitment as this reduced level of \$200k was forthcoming for 2008, with the indication that this would be the last subvention in support of the Decade (which of course continues until 2014). Spread across the entire country this is a pathetically small amount of support. Support for other ESD strategic initiatives was withdrawn so that the funds could be focused on NESDEC and the working groups. One unfortunate consequence of the funding cutback and the withdrawal of support for the other strategic initiatives (such as the ESD resource data bank and the sustainability curriculum review) was that LSF has had to seek funding from corporate

partners²⁴ and even dip into its reserve funds to allow this work to continue. Thus a small NGO has shouldered the financial burden of funding some of Canada's international ESD commitments because the federal government was unable or unwilling to do so.²⁵ Another unfortunate consequence of the funding cutback was that (even at the modest sum of \$15k per working group) there was not enough money to fund working groups in PEI and Newfoundland and Labrador, despite the fact that they have already begun to form unofficial working groups and are keen to become more active.²⁶

Provinces have varied considerably in their support for UNDESD. Although a supportive letter from the Deputy Minister of Education was one of the conditions of eligibility for potential provincial/territorial working groups (and therefore in each case they enjoyed at least that level of recognition/support from the provincial education ministry), some working groups have been hard pressed to garner additional Ministry or provincial government support. Where working groups have been most successful in getting provincial funding, it appears that they have enjoyed strong support from key politicians and a supportive senior management in the bureaucracy. (Manitoba is leading the way among Anglophone provinces, with exciting recent developments in Ontario, Saskatchewan and British Columbia.)

²⁴ Hewlett-Packard (HP) has helped fund the R4R initiative and Cadbury Schweppes has provided support for a new round of Youth Taking Action Forums aimed at senior public/junior high students.

²⁵ Several EC officials worked long and hard to win support from their Department for ESD among competing priorities in a period of internal turbulence. Their efforts are deeply appreciated in the ESD community. Although the Harper government in Canada has provided meager support for ESD, ironically the Bush government in the US recently approved a massive infusion of funds by signing The Higher Education Sustainability Act (HESA), approved by Congress as part of the new Higher Education Opportunity Act of 2008 (HR 4137) which created a pioneering "**University Sustainability Grants Program**" at the Department of Education. This program will offer competitive grants to higher education institutions and associations to develop and implement sustainability curricula, practices, and academic programs. [See the announcement at <http://ncseonline.org/Updates/cms.cfm?id=2458>]

²⁶ Since this was initially written, Working Groups have been set up in both these provinces. In order to provide funding, each existing Working Groups received a reduced allocation of \$10k in 2008-2009 in order to provide start-up funds for the two additional provinces.

ESD: Cure or Placebo?

Posing this dichotomy obviously begs the question about the existence of some sort of social illness or malady that requires a cure. Is planet earth in that much trouble? One is reminded of the cartoon that shows a doctor examining the planet and offering her diagnosis: "You've got humans!" Our high consumption lifestyle is destroying the ecosystems on which we (and many other species) depend. In a brilliant article discussing what he calls the "geopolitics of sustainability" economist Jeffrey Sachs points out that as a result of an 18-fold (!) growth in the gross world product (GWP) over the past century,

...Every major ecosystem, whether marine or terrestrial, is under stress. The world economy is depleting the earth's biodiversity, ocean fisheries, grasslands, tropical forests, and oil and gas reserves. We are massively and quickly changing the climate. These trends are occurring on a planet of 6.5 billion people and with economic activities that are already unsustainable as practiced. Yet with the economic successes now propelling India and China and the momentum of global population growth, we are on a trajectory to some nine billion people and a GWP of perhaps \$275 trillion by mid-century.²⁷

Not everyone agrees either that the predicament is as profound as this suggests; or that "humans" are to blame. (The sceptics cover a broad range of opinion, from those who claim scientific credentials [viz Bjorn Lomborg] to those who see our current problems as the unfolding of God's will.²⁸) Nor should we be too

²⁷ Jeffrey Sachs, "The New Geopolitics." *Scientific American*, June 2006. Available at <http://www.sciam.com/article.cfm?chanID=sa006&articleID=000B4E50-A56D-146C-A56D83414B7F0000&colID=31> Sachs goes on to comment that "Our global politics is not yet adapted to the challenges of sustainability". To do so we must develop new approaches to governance and global politics "based firmly on the budding science of sustainability."

²⁸ The latter group would likely comprise many of those who (like Vice-Presidential nominee Sarah Palin) believe in Creationism. In a recent Gallup poll done in the US, when presented with 3 contrasting statements about the origin of the universe 45% of respondents chose the statement that most closely describes biblical creationism: "God created human beings pretty much in their present form at one time within the last 10,000 years or so". A slightly larger percentage, almost half, chose one of the two evolution-oriented statements: 37% selected "Human beings have developed over millions of years from less advanced forms of life, but God guided this process" and 12% chose "Human beings have developed over millions of years from less advanced forms of life, but God had no part in this process." The American public has not

hasty to predict the demise of planet earth. As the comedian George Carlin remarked, “The planet has been around for billions of years. It isn’t going away. We are.”

A more thoughtful objection might reject the medical analogy of illness/disease and cure: too anthropocentric; too burdened by the ideology of medicalization. Allowing for all of these objections, is ESD capable of helping humankind “bend the curve” toward a more sustainable future, or does it – because it has a focus that is mid- or long-term rather than immediate – merely distract attention from the real challenges, in effect buying time for business as usual?

I don’t think there is an easy or straightforward response to this challenge. In some cases education has undoubtedly been put forward as a response to sustainability challenges that at the very least require more immediate action-oriented (perhaps more controversial, costly, or politically difficult) responses. This may make it appear to be a policy cop-out, a trivialization of the problem; or to go back to our medical analogy, a placebo.

While not suggesting that the opposite is true, that ESD is some sort of magic bullet that will miraculously “cure” the earth of the many sustainability issues we all face, I do believe strongly that insofar as it contributes to a sustainability “culture shift” ESD is an absolutely essential element of SD. It is necessary, though not sufficient determinant of our success in finding a way to live more sustainably on this planet.²⁹

notably changed its opinion on this question since Gallup started asking it in 1982. See <http://www.unl.edu/rhames/courses/current/creation/evol-poll.htm>, accessed Oct. 14 2007.

²⁹ Here again I may be accused of begging the question as to whether there is any truly sustainable form of development; or whether SD holds out any hope of helping usher in a more sustainable future for humankind.

Not all sustainability enthusiasts agree. Some argue that we simply don't have time to wait for culture to shift³⁰ – we need action now, and this will require a more draconian approach involving regulations and other policy measures. A slightly different objection rests on the belief that all the requisite values already exist, but are latent. We don't need to change values, merely allow them to surface. A third variant is the argument that sustainability must be made to work with the existing culture by designing policies that can leverage sustainable behaviour through clever design of incentives and disincentives.

While each of these perspectives has merit, I reject the notion that either we educate or we use regulation and economic policy instruments. We need both. Education is not sufficient, but it is certainly necessary if we are to move toward a more sustainable future. At the same time, we must always remember that education is not the same as learning, which sometimes occurs despite educational efforts to the contrary. Properly purposed, education exists in the service of learning. The ultimate goal of ESD is to help “humans” learn to live more sustainably on this planet. In pursuit of this ambitious aim, ESD must effectively connect to the rapidly increasing power of the internet, which is quickly becoming the dominant mode of continuous learning in this, the age of “exponential times”.³¹

³⁰ It would be a serious error to ignore the profound shifts in culture and social structure that are already underway in all parts of the globe, driven to a large extent by economic globalization and the transformation of electronic communications, See for example the wildly popular You Tube video “Shift Happens.” Available at <http://www.youtube.com/watch?v=pMcfLYDm2U>

³¹ This phrase appears in the video “Shift Happens” noted above.

Where Do We Need to Go with ESD?

“If you are planning ahead 1 year, plant a seed.

If you are planning ahead 10 years, plant a tree.

If you are planning ahead 100 years, educate the people.”

Confucian saying, c. 500 AD

1. I believe that ESD is basic, general education for the 21st century. Every citizen, every consumer, every employee, every decision maker³², every householder, needs to better understand the sustainability challenges and opportunities that will determine our fate. We should begin to measure “sustainability literacy” with at least as much vigour as we currently devote to other kinds of student performance.
2. Those who (in Max Weber’s phrase) “have their hands on the wheel of history,” who play important roles in organizations that shape our fate, need a more sophisticated level of comprehension of the complex inter-relationships between ecosystems and social systems, including the economy and the political system. (Note comments below on professional education.)
3. To help achieve this increased level of awareness and understanding, all three types of ESD (formal, informal and non-formal) will be required. But awareness alone is not enough. As it has from the beginning, ESD must pay attention to values, perspectives, skills and practices. It must connect the head to the heart to the hands. Ultimately the benefit of ESD must be measured in terms of changed behaviour.³³
4. With respect to formal education, ESD should indeed be infused across the curriculum – and modeled in institutional practices (the “whole school” approach) – at all levels, from pre-kindergarten to post doctoral studies.

³² Of course we are all decision makers in our everyday lives. We make hundreds if not thousands of decisions every day from the moment we wake up until we fall back asleep. We decide where to live, where to work, how to get there, what clothes to wear, what food to eat, what forms of entertainment to enjoy, whether to vote and for whom, etc etc. These myriad decisions ultimately drive the economy, the political system, and other social systems.

³³ IISD and the Manitoba government are currently undertaking a longitudinal survey to try to assess the impact on behaviour of various forms of ESD.

- This will require a comprehensive change in policies, practices, curriculum, resources, and teacher training. Some might dismiss this recommendation as unrealistic, impossible. At this point we should remind ourselves of Kenneth Boulding's "Existence Theorem: everything that exists is possible!" The good news is that prototypes of nearly all of these elements have been developed. To a large extent, what is needed is not invention but application, which requires both the enactment of supportive policies and the development of appropriate standards.³⁴
5. To the extent that this prescription is followed at the post-secondary level it will have important implications for qualification and training in all of the professions and trades³⁵. I think this is a good thing. Prototypes and precursors of the requisite change are already evident in business schools, accounting, engineering, law, education, architecture, design, planning, medicine, social work, building construction and maintenance, urban infrastructure, HVAC, agriculture, landscaping etc. However, the application of sustainability-based professional education and training is limited and not yet across the board. Within 20 years (hopefully) ESD will be mainstreamed in all these areas for both "pre-service" and "in-service" professional education and training.
 6. Societies like Canada may be on the cusp of a significant culture shift, not unlike the change that has taken place in the last 25 years in views about

³⁴ Ontario has recently developed new "standards" for environmental education as a follow-up to the recommendations of the Bondar Working Group.

³⁵ Note the following quotation from the Foreword to a recent report on sustainability initiatives in US colleges and universities:

"The men and women who, in 20 years, will lead our businesses, educational institutions and government agencies are in school now. We need to offer them the kind of academic and professional preparation that will ready them to envision and create a different kind of world. It will be a world which has new and cleaner forms of energy production, transportation, agriculture, natural resource management, health care, scientific research, micro and macro businesses, and other essential technological advances. To achieve this at the speed required will call for serious new support including new guidance and funding from federal and state governments, and a complete rethinking of how we educate every degree candidate from architecture and engineering to accounting and even teaching itself." *Campus Environment 2008: A National Report Card on Sustainability in Higher Education. Trends and New Developments in College and University Leadership, Academics and Operations* 2nd edition, August 2008. Available at <http://www.nwf.org:80/campusEcology/campusreportcard.cfm>

smoking. There is some survey data (reproduced below) to support this contention. One of the key drivers of this shift in culture will be informal ESD, especially the internet and the media. The impact of Al Gore's film *An Inconvenient Truth* illustrates how profoundly public awareness can be affected by this kind of production.³⁶ Another important development would be the use of advertising in support of SD rather than to encourage unsustainable forms of consumption.³⁷

7. Ultimately we need to learn new ways of living on this planet that will allow current and future generations of humans (and other species!) to live, and hopefully thrive. In other words we need to foster a "culture of sustainability." This is the most critical role for ESD.

Am I being ridiculously optimistic? Should I heed the Russian proverb that defines a pessimist as an "informed optimist"? (Perhaps, like Humphrey Bogart in *Casa Blanca*, "I have been misinformed" about the prospects for a more sustainable future.) I think not. I very much like the comment David Orr made at a recent lecture at York University: "Hope is a verb with its sleeves rolled up." We need to roll up our sleeves, and despair is a very poor motivator.

³⁶ A controversy arose in the UK regarding the government's plan to distribute Al Gore's film to classrooms for required viewing. A court challenge resulted in a verdict that allowed the plan to go ahead with the proviso that some of the inaccuracies and exaggerations in the film be noted and discussed.

³⁷ Chuck Hopkins brokered a "Type 2 Partnership" in support of ESD at WSSD with advertising conglomerate *J. Walter Thompson*, whose CEO acknowledged that hundreds of billions of dollars have been spent (particularly in the US) to promote unsustainability. For various reasons the partnership did not come to fruition, but future agreements may be more successful.

Appendix A: What Do Canadians Think of Sustainability?

<http://www.ekostv.com/node/307>

A survey released at Globe 2006 reveals that 53% of Canadians have never heard of the term "sustainability." Seven out of ten are unable to define the term sustainability. However, once the term is defined over 80% rated sustainability as a top or high priority national goal.

These are just some of the results of a public opinion poll conducted by James Hoggan and Associates for BC Hydro, Alcan, David Suzuki Foundation, Ethical Funds and several other organizations. The provocative findings were made public for the first time at Globe 2006 on March 31, 2006 in Vancouver B.C.

To access the full report go to:
James Hoggan and Associates www.hoggan.com

Additional Reading:

Vancouver Sun, Mar. 31/06
Section: BC Business
By M. Kane, Page H3

People 'think they're alone' in wanting to save the planet: Eight out of 10 Canadians want tougher laws to protect environment

Canadians care strongly about saving the planet but wrongly believe that many of their fellow citizens don't, according to survey findings to be released today.

They blame inadequate information and a lack of government leadership for their own failure to behave sustainably while assuming that others are not really concerned, said James Hoggan, a public relations expert.

"They think, 'Well, why should I be the chump who behaves in a more environmentally friendly manner when no one else is?' But that's because they have this mistaken view that people outside their circle of friends really don't care. That's actually not true."

The survey shows that more than eight in 10 Canadians believe the government should enact stricter laws and regulations to support a more sustainable economy that protects and manages the country's resources for future generations.

They also want taxes shifted to those who pollute and deplete natural resources, and

double GST slapped on gas guzzlers to fund tax rebates for fuel-efficient vehicles.

The findings, to be presented today at the Globe 2006 environmental business fair in Vancouver, were characterized by Hoggan as both a wake-up call and a leadership opportunity for government and business.

He said advocates of sustainable business practices "are guilty of talking to themselves a lot" instead of reaching out to the public who drive public policy and consumer patterns.

"One of the key problems that we have in Canada is that Canadians do one thing and say another," Hoggan said in an interview. "Anybody who is trying to advocate sustainable behaviour should try to weave in the message that Canadians actually do care."

He said the survey demonstrates that the great majority of Canadians want the economy to be successful today while sustaining the country's environmental, economic and social resources for future generations.

Asked why Canadians don't behave more sustainably, 48 per cent blame government leadership first.

More than seven in 10 Canadians surveyed agree with the statement: "If everyone in the world lived the consumer lifestyle we enjoy in North America, we would destroy the planet."

Hoggan also said companies and organizations need to do a better job of explaining the term "sustainability," which is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The survey is part of the Sustainability Research Initiative led by James Hoggan & Associates, a public relations agency extensively involved in environmental and sustainability issues, and the Globe Foundation, which promotes the \$1.1 trillion international business of the environment.

Sponsors include Canadian Pacific Railway, BC Hydro, the University of B.C., the David Suzuki Foundation, Vancouver-based Ethical Funds, Greater Vancouver Regional District, Concord Pacific, the Fraser Basin Council, Alcan and the Port of Vancouver.

The sustainability survey of 2,500 Canadians was conducted by McAllister Opinion Research of Vancouver in all provinces except Quebec. The findings are considered accurate within two percentage points, 19 times out of 20.

WHAT WE AGREE ON

Survey highlights:

- 92 per cent of Canadians agree Canada should phase in mandatory standards requiring all new buildings and appliances to deliver 50 per cent more energy efficiency in 10 years.
- 89 per cent approve of meeting 100 per cent of Canada's new electricity needs through conservation measures, or renewable clean energy.
- 84 per cent agree that we need stricter laws and regulations to protect the environment.
- 83 per cent agree Canada should reduce taxes on income, payroll and investment, and replace these with taxes on pollution and depletion of natural resources.
- 83 per cent want the government to set strict national sustainability targets and report back to Canadians regularly on progress.
- 82 per cent agree Canada should introduce laws to promote denser, walkable cities that would make public transit more practical and reduce traffic congestion. Some 71 per cent want the same laws to protect farmland and reduce the environmental impacts of urban sprawl.
- 79 per cent approve of tax rebates on fuel-efficient vehicles funded by double GST paid on gas guzzlers not used for commercial or industrial purposes.
- 67 per cent agree that Canadians consume more than our share of world resources.
- 64 per cent disagree that protecting the environment usually means sacrificing comfort and convenience.

Source: James Hoggan & Associates

Appendix B: Tbilisi Declaration (1977)³⁸

The world's first intergovernmental conference on environmental education was organized by the United Nations Education, Scientific, and Cultural Organization (UNESCO) in cooperation with the U.N. Environment Programme (UNEP) and was convened in Tbilisi, Georgia (USSR) from October 14-26, 1977.

Delegates from 66 member states and observers from two nonmember states participated. Representatives and observers from eight U.N. agencies and programs also participated. Three other intergovernmental organizations and 20 international nongovernmental organizations also were represented. In all, 265 delegates and 65 representatives and observers took part in the conference.

The Tbilisi Declaration was adopted by acclamation at the close of the intergovernmental conference. The declaration noted the unanimous accord in the important role of environmental education in the preservation and improvement of the world's environment, as well as in the sound and balanced development of the world's communities.

The Role, Objectives, and Characteristics of Environmental Education

The Tbilisi Declaration together with two of the recommendations of the Conference constitutes the framework, principles, and guidelines for environmental education at all levels—local, national, regional, and international—and for all age groups both inside and outside the formal school system.

- I. The Conference *recommends* the adoption of certain criteria which will help to guide efforts to develop environmental education at the national, regional, and global levels:
 1. Whereas it is a fact that biological and physical features constitute the natural basis of the human environment, its ethical, social, cultural, and economic dimensions also play their part in determining the lines of approach and the instruments whereby people may understand and make better use of natural resources in satisfying their needs.
 2. Environmental education is the result of the reorientation and dovetailing of different disciplines and educational experiences which facilitate an integrated perception of the problems of the environment, enabling more rational actions capable of meeting social needs to be taken.
 3. A basic aim of environmental education is to succeed in making individuals and communities understand the complex nature of the natural and the built environments resulting from the interaction of their biological, physical, social, economic, and cultural aspects, and acquire the knowledge, values, attitudes, and practical skills to participate in a responsible and effective way in anticipating and solving environmental problems, and in the management of the quality of the environment.

³⁸ <http://www.gdrc.org/uem/ee/tbilisi.html>

4. A further basic aim of environmental education is clearly to show the economic, political, and ecological interdependence of the modern world, in which decisions and actions by different countries can have international repercussions. Environmental education should, in this regard, help to develop a sense of responsibility and solidarity among countries and regions as the foundation for a new international order which will guarantee the conservation and improvement of the environment.
5. Special attention should be paid to understanding the complex relations between socio-economic development and the improvement of the environment.
6. For this purpose, environmental education should provide the necessary knowledge for interpretation of the complex phenomena that shape the environment, encourage those ethical, economic, and esthetic values which, constituting the basis of self-discipline, will further the development of conduct compatible with the preservation and improvement of the environment. It should also provide a wide range of practical skills required in the devising and application of effective solutions to environmental problems.
7. To carry out these tasks, environmental education should bring about a closer link between educational processes and real life, building its activities around the environmental problems that are faced by particular communities and focusing analysis on these by means of an interdisciplinary, comprehensive approach which will permit a proper understanding of environmental problems.
8. Environmental education should cater to all ages and socio-professional groups in the population. It should be addressed to (a) the general nonspecialist public of young people and adults whose daily conduct has a decisive influence on the preservation and improvement of the environment; (b) to particular social groups whose professional activities affect the quality of the environment; and © to scientists and technicians whose specialized research and work will lay the foundations of knowledge on which education, training, and efficient management of the environment should be based.
9. To achieve the effective development of environmental education, full advantage must be taken of all public and private facilities available to society for the education of the population: the formal education system, different forms of nonformal education, and the mass media.
10. To make an effective contribution towards improving the environment, educational action must be linked with legislation, policies, measures of control, and the decisions that governments may adopt in relation to the human environment.

II. The Conference *endorses* the following goals, objectives, and guiding principles for environmental education:

The *goals* of environmental education are:

1. to foster clear awareness of, and concern about, economic, social, political, and ecological interdependence in urban and rural areas;
2. to provide every person with opportunities to acquire the knowledge, values, attitudes, commitment, and skills needed to protect and improve the environment;
3. to create new patterns of behavior of individuals, groups, and society as a whole towards the environment.

The categories of environmental education *objectives* are:

Awareness—to help social groups and individuals acquire an awareness and sensitivity to the total environment and its allied problems.

Knowledge—to help social groups and individuals gain a variety of experience in, and acquire a basic understanding of, the environment and its associated problems.

Attitudes—to help social groups and individuals acquire a set of values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection.

Skills—to help social groups and individuals acquire the skills for identifying and solving environmental problems.

Participation—to provide social groups and individuals with an opportunity to be actively involved at all levels in working toward resolution of environmental problems.

Guiding principles—environmental education should

1. consider the environment in its totality—natural and built, technological and social (economic, political, cultural-historical, ethical, esthetic);
2. be a continuous lifelong process, beginning at the preschool level and continuing through all formal and nonformal stages;
3. be interdisciplinary in its approach, drawing on the specific content of each discipline in making possible a holistic and balanced perspective;
4. examine major environmental issues from local, national, regional, and international points of view so that students receive insights into environmental conditions in other geographical areas;
5. focus on current and potential environmental situations while taking into account the historical perspective;
6. promote the value and necessity of local, national, and international cooperation in the prevention and solution of environmental problems;
7. explicitly consider environmental aspects in plans for development and growth;
8. enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences;
9. relate environmental sensitivity, knowledge, problem-solving skills, and values clarification to every age, but with special emphasis on environmental sensitivity to the learner's own community in early years;
10. help learners discover the symptoms and real causes of environmental problems;
11. emphasize the complexity of environmental problems and thus the need to develop critical thinking and problem-solving skills;
12. utilize diverse learning environments and a broad array of educational approaches to teaching, learning about and from the environment with due stress on practical activities and first-hand experience.

Appendix C: Activities of Canadian Provincial and Territorial ESD Working Groups³⁹

Working group facilitates collaboration and synergy for the development of formal education projects/programs

- BCWG [British Columbia Working Group] in collaboration with The Ministry of Education, and BC Hydro has developed *Conceptualizing Environmental Learning: An Interdisciplinary Guide for Teachers* and a curriculum map to assist teachers of all subjects and grades to integrate environmental concepts into teaching and learning.
- BCWG is developing The *Taking Stock* document to look at what is happening with regard to sustainability at universities and colleges across BC (www.walkingthetalk.bc.ca/node/468).
- BCWG in Collaboration with the Ministry of Advanced Education has created 2 one-year walkingthetalk scholarships for master's or PhD students working on a topic related to sustainability education.
- MESDWG [Manitoba Education for Sustainable Development Working Group] is creating ESD-focused education resources intended for the grade 12 level with the support of the Minister of Education and Manitoba Education Citizenship and Youth
- EASO [Education Alliance for a Sustainable Ontario] - provided input to the Grades 1 – 10 Science and Technology curriculum review, provided input into the Working Group on Environmental Education, provided input to the Ministry of Education's proposed high school "Specialist High Skills Major" (SHSM) program in Energy and Environment, participated in the review of Environmental Education Standards being developed by the Ministry of Education as a follow up to the Bondar Report
- EASO, Ontario Teachers' Federation, Ministry of Education, Ministry of Natural Resources are facilitating the development and delivery of 9 (6 English, 3 French) summer camps to provide Ontario teachers with developmental professional learning on biodiversity and other sustainability issues in support of the Bondar report.
- SESDWG [Saskatchewan ESD Working Group] has organized four youth forums, bringing together more than 300 students to learn about sustainability issues and engage in action projects, 2007 Forums will take place in Saskatoon and Ile la Cross. SESDWG is exploring an opportunity

³⁹ This information is taken from the "Proposal to Environment Canada From Learning for a Sustainable Future (LSF) in support of the National Education for Sustainable Development Expert Council (NESDEC) and Provincial/Territorial Education for Sustainable Development Working Groups (March 2008)" By 2008 working groups had been established in Alberta, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, British Columbia and Nunavut.

to partner with Action Research: Community Problem Solving (AR:CPS) in Quebec to have access to Youth Action Forum programming for grade K – 12 in French.

- SENSE [Nova Scotia ESD Working Group called Sustainability Education in Nova Scotia for Everyone] has delivered Natural Step and Footprint programs to schools and communities in NS

Working Group facilitates projects and programs in non-formal ESD

- ABWG developing a carbon neutral eco-village
- Sask WG is acting advisory board for the new Green Life TV series-documentary style series to facilitate real and lasting change that will engage the Saskatchewan community in environmental issues
- SENSE launched the Ecological Footprint project and Schools Facilities Management Greening program in schools across Nova Scotia SENSE has delivered Natural Step to businesses and communities

Working groups facilitate dialogue and networking

- BCWG www.walkingthetalk.bc.ca- communicative online gathering place which has 295 members representing 50 communities across BC and 11 communities internationally
- BCWG “What is sustainability education?” dialogue held at the Wosk Centre for Dialogue in March 2007, bringing together more than 75 sustainability educators and decision-makers from across BC, and the development of ten principles of sustainability education out of the dialogue.
- ABWG –[Alberta Working Group]hosted a three day envisioning proves with 35 formal, non-formal and informal education stakeholders to develop a shared vision, form groups with common themes, and develop action plans
- MESDWG is hosting an International ESD Conference in Winnipeg on November 26 to 28th, 2008 in collaboration with the Science Teachers Association of Manitoba. The conference being held in the Winnipeg Convention Centre is expected to attract upwards of 700 registrants.
- SESDWG hosted a Symposium on April 19 & 20, 2007 entitled Toward a Sustainable Future.
- SESDWG is exploring an opportunity to partner with Action Research: Community Problem Solving (AR: CPS) in Quebec to have access to Youth Action Forum programming for grade K – 12 in French.
- Education for Sustainable Development Networking Forum held on September 21, 2006 at Downsview Park. Engaged 180 individuals. In total, 37 groups displayed information about their organization and their ESD activities.

- SENSE is hosting the First Annual Sustainability Education Symposium and Public Forum on Sustainability Education in March 2008
- Saskatchewan International RCE meeting is planned for May 25th – 27th. Severn Cullis-Suzuki, from the David Suzuki Foundation, has been confirmed as the keynote speaker on May 25th.
- The NB Working Group functions in a fully bilingual manner. All meetings have simultaneous translation; all documents produced for the Working Group are in both official languages. Both francophone and anglophone participants are strongly engaged in the Working Group.

Working groups facilitate communication to the broader public

- MESDWG has created a web page on the Manitoba Education Citizenship & Youth website and is planning the development of a Website for the WG and International Conference
- MESDWG is working with Green Manitoba and the Manitoba Forestry Association to facilitate a series of Educating the Educator workshops that addresses topics of interest to the ESD and EL community. Four workshops have been presented to the public since June 2007.
- SENSE has created a Sustainable Development Resource Directory
- SESDWG is creating www.saskesd.ca, a website serving as information portal and networking tool to advance sustainability education in the province
- EASO has created a newsletter that is sent out quarterly to its members and networks, and is creating a website
- NBWG has created a website (www.nben.ca/seanb) and listserv for the working group.
- BCWG has developed the walkingthetalk website and newsletter as a way of sharing ideas and connecting sustainability educators from the K-12, higher education, and non-formal sectors. (currently more than 430 members)

WG facilitate research

- MESDWG has in partnership with the International Institute for Sustainable Development, Manitoba Education Citizenship and Youth is undertaking research to expand the IISD Policy Bank Initiative as well as baseline data project to measure ESD attitudes pre and post decade
- EASO, the Toronto Regional Centre for Expertise, the University of Toronto and Learning for a Sustainable Future have collaborated on the creation of a survey tool to collect data on ESD programs and activities through the NESDEC, WGs and RCEs.

WG group facilitate change – modeling SD

- ABWG is modeling sustainability in the events by ensuring the food is organic, vegetarian/vegan, low waste, and car pooling/busing is encouraged.

Initiatives relating specifically to Environmental Sustainability

- SENSE has launched the Ecological Footprint project and Schools Facilities Management Greening program in schools across Nova Scotia
SENSE has delivered Natural Step to businesses and communities
- SENSE has launched the Atlantic Canada Sustainability Initiative that is assisting organizations, municipalities and businesses with sustainability planning
- EASO provided input into the Provincial Environmental Education policy, curriculum review and implementation. Through input into the Working Group on Environmental Education, Chaired by Roberta Bondar, Shaping our School, Shaping our Future contained 32 recommendations to strengthen ESD in Ontario schools. EASO provided input into the Environmental Education Policy and EE standards. EASO coordinated input from 14 organizations into the Science and Technology curriculum review. EASO is coordinate stakeholders from the health and environment sector to provide input into the Health and Phy Ed curriculum review process.
- EASO, Ontario Teachers' Federation, Ministry of Education, Ministry of Natural Resources are facilitating the development and delivery of 9 (6 English, 3 French) summer camps to provide Ontario teachers with developmental professional learning on biodiversity and other sustainability issues in support of the Bondar report.
- EASO Biodiversity Survey - During the fall of 2007, the Biodiversity Education and Awareness Network (BEAN) subcommittee of EASO surveyed providers of biodiversity education and awareness programs, materials and activities. The purpose of the survey was to provide BEAN with information with which to effectively plan strategic, cost-effective actions related to the promotion and delivery of biodiversity education and awareness. One hundred fifteen groups responded - 30% of all responses were formal activities, 29% were non-formal activities and 41% were informal activities.
- MESDWG is partnering with the St. James School Division and Green Manitoba to support the development and dissemination of an ESD Resource Kit that the school division has developed for use within their division. The intent is to pilot and develop the ESD Resource Kit for implementation across Manitoba School Divisions over the next two years.

- NBWG has developed a green schools web portal for teachers, a resources kit to help schools/colleges initiate composting and energy conservation projects, they are sharing of resources with teachers, and looking into a provincial green school policy, and funding proposals.