

Sustainable Development in Canada:

2005 Update



By Mary MacDonald and Susan Holtz

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CIELAP's Work in Sustainable Development

Sustainable Development in Canada: A New Federal Plan, 2001 - Report

Partnering for Sustainability Conference, 2002 – Proceedings

Partnerships for Sustainability, 2002 – Report

Check list for Partnerships, 2002 – Flyer

Partnering for Sustainability Conference, 2004 – Proceedings

Sustainable Development in Canada: 2005 Update – Report

Partnerships for Sustainability: A Guide to Policy for Partnerships in Canada, 2005 – Report

Partnerships for Sustainability: Developing Canada's Federal Partnerships: Policy Considerations in the Resource and Environmental Fields, 2005 – Report

Partnerships for Sustainability: How to Make a Partnership Work, 2005 – Report

Partnerships for Sustainability: Evaluating and Improving Two Partnerships, 2005 – Case Study

Partnerships for Sustainability: Getting the Most out of Partnerships, 2005 - Report

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Executive Summary

As part of the lead-up to the 2001 World Summit on Sustainable Development in Johannesburg, the Canadian Institute for Environmental Law and Policy (CIELAP) published its assessment of sustainability initiatives in Canada and recommended a four-step approach to sustainable development (SD) strategies (*Sustainable Development in Canada: A New Federal Plan*). This *Update* reviews that proposed four-step strategy and, using an affirmative approach that identifies interesting and successful initiatives, looks at Canada's sustainability planning and overall progress three years later.

While acknowledging the importance of action at all levels, the limited scope of this report mainly focuses on national actors, especially the federal government. The methodology involves an assessment based on discussions with federal officials and others, as well as on a review of all 29 federal departmental Sustainable Development Strategies, plus various documents produced during the period. (Section 1.) The authors also note gaps where more effort is needed and provide nine recommendations, including suggested priorities for action.

Section 2 summarizes the four steps CIELAP recommended in 2001 for creating SD strategies, namely:

- Step 1:** Focusing on a limited list of major concerns and setting long term goals in those areas;
- Step 2:** Setting shorter term objectives with clear time lines, implementation mechanisms and resources as interim steps toward long term goals;
- Step 3:** Measuring and reporting on *outcomes* of sustainability initiatives, not just identifying programs and resources contributed to sustainability goals and objectives; and
- Step 4:** Periodically standing back to evaluate feedback and assess progress based on the fundamental goals of sustainable development, and in that light revising the overall strategy as necessary.

In revisiting this four-step approach (Section 3), the *Update* amends the suggested time lines for long term goals to 25 - 35 years (from the originally proposed 50 to 100 years), and emphasizes that the original proposal for a federal plan or strategy was not and is not intended to replace the federal departmental Sustainable Development Strategies mandated by the *Auditor General Act*. On the contrary, this report suggests that a federal strategy could provide a context or framework for the departmental Strategies, with a stronger mandate for interdepartmental cooperation on major priorities. The authors conclude that in general, the proposed four-step planning strategy remains highly relevant; SD strategies continue to be the most important planning tool for all corporate bodies to bring sustainability thinking into all of the activities that they do. The need for both short and longer term goals and objectives was pointed out by the Commissioner of Environment and Sustainable Development (CESD) in her observations about the latest (2004) versions of federal departmental SD Strategies, although a number of departments have indeed moved forward in this direction.

Two areas that have emerged both as requiring and, in a few departments, actually beginning to receive more attention are (1) developing more effective coordination mechanisms and partnerships to address issues that are beyond the scope of any one agency; and (2) programs for education and learning about sustainable development for all employees, not just those involved in creating SD Strategies. One aspect of sustainable development planning that demands more intellectual leadership is the lack of a broad consensus concerning a framework for the social and economic dimensions of sustainability.



Section 4 reviews current conditions, highlighting new programs, agreements, and other initiatives at different levels. Included in a discussion of the international context are the Kyoto Protocol; the Convention on Biological Diversity; and the Johannesburg Plan of Implementation 2002. Federal level initiatives include the departmental Sustainable Development Strategies, now in their third updated versions; the National Round Table on the Environment and the Economy's (NRTEE's) work on indicators for human and natural capital; and a proposal for Sector Sustainability Tables. A number of examples of recent sustainability programs in business and industry, in municipalities, and undertaken by the research community are also identified.

Sections 5 and 6 discuss six areas that need to be strengthened and offer the recommendations listed below. The *Update* concludes that there has been some real progress on sustainability in Canada and that it can be found in many different forms – from inspired policy statements, to innovative partnerships and funding programs, to hands-on community projects and beyond. CIELAP proposes building on and learning from the sustainable development initiatives documented here, and addressing the weak nodes of sustainability practice, such as leadership and priority-setting, that are highlighted in the following recommendations.

Recommendations

- At all levels undertake and support strong leadership explicitly identified as being for progress on sustainable development, but most especially from the Prime Minister and Cabinet.
- The Federal Government should determine a short list of sustainability priorities for immediate action, and criteria for those priorities should be themes or issues with
 - Significant long term benefits
 - Increasing long-term costs and risks if not dealt with in the present
 - Linkages to many specific concerns, which reinforce positive actions in many ways
 - Powerful symbolic and inspirational value for at least one of the priorities.

CIELAP suggests a short list of priorities addressing

- The Kyoto agreement
 - Childhood poverty and deprivation, including early education and daycare
 - Cities, especially public transit and environmental infrastructure
 - “Greening” Canadian competitiveness and innovation
 - Homelessness.
- Increased attention to more effective cooperation and coordination among government departments and levels of government on sustainability priorities.
 - Sustainability education and experience for all government employees, not just a select group identified to develop a departmental SD Strategy or work on its implementation.
 - A better understanding that sustainable development goals are more than goals for sound environmental management, along with greater analytical efforts to develop a useful sustainability framework for social and economic development goals and objectives.



- Continuation and expansion of the trend in sustainability strategies and planning from general commitments to specific programs and objectives.
- Broad and ongoing consultations on sustainability initiatives that include grassroots and community groups along with other stakeholders, and the resources to ensure that such groups can participate meaningfully.
- More support for science, environmental and sustainability monitoring, reporting, and systems for learning and knowledge dissemination.
- More unconventional partnerships (for example, across disciplines – psychology and environmental science; between organizations – management schools and environmental non-governments organizations; across sectors – energy and education) to better understand the integrative dimension of sustainable development and to stimulate innovation.



2005 Update on Sustainable Development in Canada

1.0 Introduction

In 2001, as a contribution to the lead-up in Canada to the World Summit on Sustainable Development in Johannesburg in October 2002, the Canadian Institute for Environmental Law and Policy (CIELAP) published *Sustainable Development in Canada: A New Federal Plan*¹. This paper discussed what was needed for an effective approach to sustainability strategy development, reporting on which was part of governments' commitments at the 1992 Rio summit.

In 2004, CIELAP revisited sustainability initiatives in Canada, primarily at the federal level, and has found some indication that sustainable development is beginning to move beyond a list of good intentions into action. However, it is also not surprising that many of the sustainability challenges identified in CIELAP's *Sustainable Development in Canada* still exist. After all, three years is not that long a time in the public policy realm and managing change, particularly within large institutions, is not easy. But there are an increasing number of projects, programs, and innovative approaches focused on achieving substantial sustainability results, and that alone is good news.

1.1 An Affirmative Approach

The field of appreciative inquiry deals with moving forward by understanding what is working within a process or program and building on that. This is in contrast to the more traditional approach of identifying barriers and obstacles and taking steps to remove them. This *Update* emphasizes areas where progress is being made both from the perspective of the four-step strategy proposed by CIELAP, and on the sustainability challenge in general. However, we will also note some gaps – areas where we might expect progress or at least significant effort, but where little has been accomplished to date.

1.2 Methodology and Scope of This Update

Reviewing all the recent developments in Canada relevant to sustainability is obviously too big a task for anything shorter than an academic thesis. Therefore, this *Update* attempts to summarize and highlight progress, rather than to document every initiative, and in so doing discusses a limited number of programs, departmental strategies, and other efforts. In preparing the report the authors briefly reviewed virtually all of the federal departmental Sustainable Development Strategies, consulted with individuals from many agencies, and utilized a variety of other sources in addition to their own knowledge. The methodology is thus basically impressionistic rather than systematic, but is based on a broad range of experience.

In scope, this report focuses on the federal government, the Sustainable Development Strategies of federal government departments, and, to a limited degree, on national actors such as industry and the research community. The role of the provinces, while vital in achieving sustainable development goals and objectives, was beyond the scope of the paper. Neither could the actions taken by municipalities be extensively reviewed.



Nevertheless, we are aware that individual towns and cities have been some of the most active players in addressing sustainability issues, particularly the Kyoto challenge. Additionally, we acknowledge the many initiatives by community groups and NGOs to help us as a society move to a more sustainable path.

Working Toward Sustainable Development

As a concept, sustainable development provides a values-based framework for the choices and direction of change in a society. Ultimately it is about valuing and promoting human well-being and, equally, the integrity and health of the ecosphere which surrounds and sustains human activities. However, many people find it difficult to understand what converting these values into practical action entails. On the one hand, and especially within government agencies with mandates such as health or international development, people often say, “But then isn’t everything we do sustainable development?” On the other hand, others may assume that sustainable development or sustainability (in this paper, we use the terms interchangeably) is about environmental initiatives and chiefly concerns agencies with environment and natural resources mandates. Both of these perceptions are partly right, but incomplete. Virtually all of society’s economic and social development, as well as its governance activities, **are** implicated in sustainable development. It does not mean, however, that Canada is already following a sustainable development path. Sustainability requires that planning for **all** development-related activities must review and be constrained by social equity impacts and economic and environmental considerations. Similarly, environmental initiatives must also incorporate social and economic constraints. In the short to medium term there may often be difficult trade-offs, and in the medium to longer term, changes in direction, which cannot be accomplished quickly, will be required. But, unless social, environmental, and economic criteria are all met at the same time, any measure can only be considered partially successful in moving toward sustainability. Recognizing all of what is not yet sustainable is an important part of understanding the concept. The good news is that innovative solutions that address all aspects of sustainability are being found. For further discussion of sustainable development as a framework for decision-making, see Section 3.4 and Appendix A.

2.0 Background: CIELAP’S 2001 Assessment

In 2001, CIELAP analyzed the state of sustainable development in Canada and concluded that while there had been strong public statements during the previous decade about commitment to sustainability from many different sectors, widespread evidence of the integration of sustainability principles into day-to-day operations and decision-making in governments, industry and community agencies was not apparent.

In response, CIELAP proposed a four-step approach to creating sustainable development strategies to help Canada more effectively meet the sustainability challenge. This approach could be used as a framework for planning and reporting on Canada’s overall progress, and was also applicable to the federal departmental strategies mandated by the *Auditor General Act*.



Canada's Federal Sustainable Development Strategies

In 1995, Parliament amended Canada's *Auditor General Act* to establish the position of Commissioner of the Environment and Sustainable Development (CESD). This legislation also required some 25 federal departments and agencies to produce Sustainable Development Strategies, to table them in the House of Commons, and update them every three years. The CESD assesses and reports to Parliament on the tabled Strategies.

The first round of Strategies was tabled in the House of Commons in December 1997, the second in 2001, and the third in 2004. A number of federal agencies have voluntarily developed their own Strategies, and 29 were tabled in February 2004.

CIELAP's approach to sustainability strategies recommended:

- Step 1:** Focusing on a limited list of major concerns with an emphasis on setting long term, over-arching goals in those areas
- Step 2:** Setting shorter term objectives with firm timelines and identifying and allocating the resources and mechanisms required to achieve them as interim steps on the way to meeting the longer term goals
- Step 3:** Measuring and reporting on the *impacts* of specific programs and projects to increase sustainability. In other words, tracking outcomes of initiatives, not just identifying programs and resources contributed toward sustainability goals and objectives
- Step 4:** Periodically standing back from the sustainability strategy goals, objectives, and initiatives to evaluate feedback and assess overall progress based on the fundamental values of sustainable development, and revising the strategy as necessary in that light.

The difference between the third and fourth steps should be clarified. An example from an environmental organization's carpooling initiative in Halifax from some years ago helps to illustrate the distinction. At that time, the organization identified where traffic congestion and air quality impacts were most severe, and worked with large employers in the area to promote and set up carpooling arrangements among employees. The program was well conceived and successful in setting up new carpools. (Step 3: the intended outcomes were assessed and actually occurred.) However, a subsequent internal evaluation revealed that almost all of the individuals now carpooling had not previously driven their own vehicles, but had been public transit users. This information was used to inform sustainable transportation policies, re-directing support to various new public transit programs and improvements that would actually get more people out of their cars. (Step 4: a mid-course correction.)

3.0 Updating the Analysis

As noted above, in 2001 CIELAP's main contribution to assessing Canada's sustainability initiatives was to propose a new approach to sustainable development strategies. Though aimed at the development of a federal plan, the approach was, and remains, equally appropriate for national, federal, business corporation, or federal departmental strategies.



It should be emphasized that, at the time and presently, CIELAP's support for the development of a federal plan or strategy does *not* mean doing away with the existing federal departmental Sustainable Development Strategies. On the contrary, a federal strategy – which still has not been developed – should be aimed at a higher, longer term, more strategic level than the departmental Strategies, and would give more coherence and direction to the key departmental priorities and to necessary interdepartmental coordination. The departmental Strategies should be “nested” in any federal strategy that is developed. And though it would be much more complex to create, a genuine national strategy could attempt to set out common sustainable development goals, priorities and initiatives developed in federal, provincial, and municipal levels of government as well as in civil society. This kind of national plan would be an ambitious project to undertake in a federal state like Canada.

Sustainable development strategies remain the most important planning tool for corporate bodies to bring sustainability thinking into all of the activities that they do. Such strategies are essential for articulating and implementing a comprehensive vision that involves the goals and direction of a corporate body, as well as taking concrete steps to bring about the changes and new actions needed to align all activities with this vision. Within the governance framework, part of the usefulness of sustainable development strategies is that they contribute to institutions founded on shared Canadian values, rather than reflecting partisan political concerns of the day.

It seems worthwhile, therefore, to take the time to review CIELAP's recommended approach to strategy development in light of further experience. This paper also highlights other aspects of the commitment to sustainability that have emerged as new challenges both within and beyond the federal agency Strategies.

3.1 Revisiting CIELAP'S Approach to Sustainability Strategy Development

Three years after it was proposed, CIELAP's four-step strategy has maintained its relevance and, in a general way, has been reaffirmed as an effective approach to increasing sustainability.

Step 1: Focusing on a short list of priority concerns with an emphasis on setting long-term goals. There is agreement and action on this first recommendation in most of the federal agency Sustainable Development Strategies. The federal government has given some priority to reducing greenhouse gas emissions. Focus on a single issue has raised awareness and increased the number of programs and projects that reflect this goal at all levels of government, in industry, and in the NGO and research communities. However, a single concern is not enough and the federal government should take strong leadership, emphasizing the sustainable development context and immediate action, on a short list of other major priorities that clearly reflect the integration of social, economic and environmental concerns. An example might be green economic development that is likely to increase Canada's competitiveness – and, hence, sustainability – internationally, while also addressing environmental problems at home and abroad.

CIELAP originally proposed a 50 to 100 year timeline for long-term goals but now suggests this time frame be changed to 25 to 35 years. There are two reasons: first, for long-term planning 25 to 35 years is just barely within the range of what governments are able to consider; it is very difficult for governments to see a longer time frame as meaningful. Secondly, such a long time line is not realistic for setting societal objectives, because many things that matter change in unexpected ways over 50 to 100 years; things as diverse as everyday technologies, human diseases, political and economic realities, population patterns and, perhaps, climate.



Step 2: Setting short-term objectives and developing non-negotiable limits and tools for meeting them. The value of this recommendation was recognized in the 2004 sustainable development strategies, and singled out by the Commissioner of the Environment and Sustainable Development as essential to achieving greater sustainability. In fact, the need for both shorter- and longer-term goals and objectives was addressed by the Commissioner and, again, pointed out as a current weakness at the federal government level.

Step 3: Measuring and evaluating the impacts of sustainability programs and projects. Very little progress has been made on this recommendation. Understanding what we can achieve with a more sustainable approach to planning, development and activities of all kinds remains urgent.

Step 4: Testing for sustainability on a regular basis. This recommendation is the least understood and/or practised. It remains of vital importance because without the knowledge to determine whether or not we are moving in the direction of sustainability it is very difficult to achieve any type of progress. Efforts will be duplicated, innovative approaches may remain relatively unknown and unacknowledged and our ability to build on what is working will be dramatically impaired. Much more is required including institution-building, resources, and conceptual work in order to have the capacity to measure and report on sustainable development progress in Canada.

3.2 Coordination and Partnerships

From the time of the Brundtland Report,² sustainability advocates have understood that an important part of the challenge is the lack of integration of socio-economic and environmental considerations. Moreover, the typical division of governments into many departments or “silos” helped institutionalize this separation of environment and development goals. Consequently, sustainability progress means addressing not only each agency’s own activities, but working with the other players involved in overlapping issues and problems to develop common goals, objectives, and plans for taking action. Basically, any party that has the ability to impede progress on a sustainability issue must be involved in the process. This can make for many very complex and demanding situations. Thus, active, successful partnerships are another dimension of progress to assess. This is particularly the case because, although commitment to participate in such partnerships may be a part of a department’s sustainable development strategy, the activities and effectiveness of the partnerships are outside the responsibility of any one agency.

3.3 The Meta – Issue of Education and Learning

One of the interesting points to emerge from the experience gained by having completed three rounds of Sustainable Development Strategies is the recognition by some federal government departments that federal government employees need to learn more about the concept of sustainable development. Indeed, it stands to reason that if driving sustainability thinking into all activities is the ultimate goal, then everyone throughout each agency needs to understand the concept of sustainable development in order for it to affect both their decisions at work and in their personal lives. It is not enough for a department or organization to have only a small group within the organization understand the ideas and produce the Sustainable Development Strategy. Recognizing the importance of this insight, we believe more attention is needed to the meta-issue of learning and education within and throughout organizations. And although more effort is required, we would like to highlight the fact that in the most recent set of Strategies, a few departments have given employee education in sustainability a prominent role. Health Canada is a good example.



3.4 The Problem of Social/Economic/Human Well-being Goals and Objectives

Historically, the business of both governments and corporations has been mainly concerned, directly or indirectly, with human well-being. Or, using the terminology of the “three pillars” approach to sustainability, with activities that contribute to social and economic goals and objectives. In terms of values, the other dimension of sustainability, the environment – the “third pillar” – has been the new kid on the block. Sustainable development thinking owes its origins to attempts to get governments and businesses to consider the environment with the same seriousness, and at the same time, as their social, economic, and political agendas.

However, in the last 15 years the discourse about sustainable development has moved forward. The concept is larger and more complex than just having governments and industry carry on business as usual but pay some greater attention to the environment. The Brundtland definition of the term as “development which seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future”³ placed development in the context of meeting human needs, with particular attention to the poorest and most vulnerable. The Brundtland Commission also emphasized that addressing sustainable development requires changes in priorities and institutional structures internationally and in all countries in both the developed and developing world. In discussing strategic imperatives, the Commission states that the pursuit of sustainable development requires, among other things, attention to equity, human health, and education; to the re-orientation of technological development; to ensuring that political systems permit effective citizen participation in decision making; and to generating jobs, economic surplus, and technical knowledge on a self-reliant and sustained basis.

Business and industry quite rightly saw the idea of sustainable development as validating at least some of their contributions to economic, and, less directly, to social well-being. The jobs, economic benefits, and technological innovation they create were recognized as a vital part of sustainable development. To be sure, much more could be done. Companies should be investing in new technology and re-thinking and re-designing products; taking responsibility for the ultimate disposal of those products and the avoidance and management of waste; and they should be developing more effective ways to engage with local communities, their employees, and their other stakeholders. However, looked at analytically from a business perspective, the idea of sustainable development does not change the reason companies exist; that is, to carry out productive economic activities. Environmental and social concerns involved in sustainability are fundamentally new constraints that must be completely integrated with the way commerce and industry go about their primary function of staying in business. It helps that in many cases, businesses making radical innovations for sustainability reasons have thereby achieved an improved bottom line.⁴

For governments and their separate departments, however, the socio-economic agenda for progress on sustainable development is more problematic. Governments are responsible for regulating activities that affect the environment, but that is only part of their job. They are also the main actors in policy decisions, programs, and legislation that directly affect human well-being at the societal level. They are primarily responsible for actually achieving the positive social policy goals and objectives of development. And yet, these are precisely the least well-defined dimensions of sustainability.

Unlike socio-economic goals, the underlying environmental goals are basically negative: humans must not impair the functioning and integrity of ecosystems. Sometimes people may want to take action to restore functioning



and integrity, but humans do not need to *create* the planet's ecosystems. We just need to learn not to mess them up. And in the last 25 years, there has been great intellectual progress on describing and categorizing the kinds of negative environmental changes human activities cause. For planning and assessment purposes, we have a comprehensive, objective understanding of the types of change we are concerned about – chemical, physical, and biological – and the categories of activities that cause damage; that is, the production of pollutants and waste; physical and biological re-structuring; and the rates of harvesting and extraction. In the 1980s, the World Conservation Strategy formulated a three-part articulation of fundamental environmental goals related to this analysis, as follows:

- Maintenance of essential ecological processes and life support systems;
- Preservation of genetic diversity; and
- Sustainable utilization of species and ecosystems.

This analysis can be and is routinely used in environmental planning, assessment, and reporting to review whether the environmental goals or considerations being used are logically organized and comprehensive in covering all potential concerns. As well, especially in the literature about environmental assessment, there has been much discussion of the thresholds and trade-offs involved in determining the significance of anthropogenic environmental change.

However, there is no comparably succinct but comprehensive set of basic goals, constraints, and activities that can be used as a check list for societies' or governments' development agendas. This is not to say there is no intellectual work being done in this field. On the contrary, researchers have developed dozens, perhaps hundreds, of different approaches to describing and assessing human well-being, ranging from social indicators research to healthy or safe communities criteria, to the United Nation's Human Development Index. Nonetheless, although this work sometimes does inform sustainable development strategies, there are no widely utilized, comprehensive and objective descriptors of development that have the same specificity and rigor as those used for environmental sustainability.

This poses problems for sustainability planning and assessment of progress, particularly for governments. Without a common conceptual framework it is unclear whether all major categories or topics related to development have even been addressed; and it is unclear whether criteria for setting priorities within and across agencies are appropriate and consistent.

CIELAP recommends that the federal government undertake a serious effort to address the measurement of progress on human development in the context of sustainable development planning. Developing an appropriate conceptual framework would involve three tasks: (1) determining topics to be addressed; (2) determining basic goals for those topics; and (3) setting constraints on how those human well-being goals are pursued, based on the core values of sustainable development.

The first task is to create a short but comprehensive set of topics concerned with fundamental human needs. These would constitute the "what" when addressing human development, and would include basics such as food security and nutrition; shelter; sanitation; health care and health status; income; and security. The broader concept of sustainable development, would, of course, include a clean and healthy environment, which is also a prerequisite for meeting these human needs. This set of development topics could be created by a federal or



federal-provincial coordinating committee, with input from the public, the Commissioner for Environment and Sustainable Development, and from agencies such as the National Round Table, the International Institute for Sustainable Development, and the International Development Research Centre.

Goals for these topics could be developed in a variety of ways, with coordination through many possible mechanisms. However, it would be the task of federal departments and agencies to create their own objectives for pursuing these goals in their departmental sustainable development strategies.

Finally, constraining criteria for how development goals and objectives are addressed need to be articulated. The deep double values of sustainable development – human well-being and the environment, equally – mean that the various aspects of sustainable development cannot be pursued in isolation. Environmental concerns must act as constraints on development initiatives and vice versa. One constraint in all planning is that the means should be effective, that is, programs and policies should actually accomplish what they set out to do. CIELAP suggests that, besides environmental constraints, discussed above, sustainability implies that initiatives must be economically sustainable, that is, that sufficient resources are available for the anticipated lifetime of the project. The remaining values-based constraint is equity: initiatives should improve, or at least not worsen, the position of the weakest or most vulnerable, and the distribution of the costs, benefits, and risks to those affected must be equitable.

Such a conceptual framework would greatly improve our ability to focus and measure progress on sustainability in general and on Canada's human development efforts in particular.

4.0 Current Conditions

During the last three years the federal government has renewed commitment to greater sustainability both internationally at the World Summit on Sustainable Development in 2002, and nationally through the development and release of a new set of Sustainable Development Strategies by 29 federal government departments and agencies. In many cases, the new strategies have gone beyond identifying priorities, objectives and values, as was more common in previous years, to now include concrete programs and projects.

4.1 The International Context

Increasingly, broad international agreements are being translated into national and local level programs with tangible sustainability benefits. Examples include:

Kyoto Protocol. With the ratification of the Kyoto Protocol by Russia in November of 2004, the threshold of 55 countries that produce 55 percent of the world's 1990 carbon dioxide emissions has been reached and the Kyoto Protocol that sets targets for reducing greenhouse gas emissions will come into effect in February 2005. Although the targets set by Kyoto are relatively modest – compared to the sixty percent reduction that many in the scientific community are calling for – it is a start in the direction of curbing greenhouse gas emissions.

During the last three years, Canada has ratified the Kyoto Protocol (December 2002) and in the spring of 2004 began a widespread public campaign called the *One Tonne Challenge* designed to get Canadians to reduce per capita greenhouse gas emissions by one tonne per year.⁵



In the last few years, most provinces have developed energy efficiency incentives directed at home and businesses as well as the transportation sector. All of these efforts go beyond general commitments and demonstrate the implementation of practical strategies to reduce greenhouse gas emissions.

Convention on Biological Diversity. The Convention on Biological Diversity has been in force since early 1994 and countries continue to sign on. Over 165 countries of the 187 nations involved in developing the convention at the Earth Summit in 1992 are signatories. During 2002-2003 a Federal-Provincial-Territorial Biological Diversity Working Group developed a framework for the Canadian Biodiversity Index to:

- Report on biodiversity in a meaningful, concise, and easy-to-understand way;
- Assess the success of biodiversity management in Canada, and
- Meet some of the reporting requirements of the Canadian Biodiversity Strategy (also a result of the Canada's commitments under the Convention on Biological Diversity).

The framework is now being applied to real data across the country to “ensure it’s a robust and useful tool.”⁶

World Summit on Sustainable Development. The Johannesburg Plan of Implementation 2002 was generally considered weaker than Agenda 21, the Plan of Action signed at the United National Conference on Environment and Development held in Rio de Janeiro in 1992. However, there are commitments in the Johannesburg Plan of Implementation that support sustainability in new ways. For example, actions are identified relating to structural reform within the WTO to ensure developing countries share the benefits of widespread trade liberalization. This example has been integrated into the 2004-2006 Sustainable Development Strategy for the Department of Foreign Affairs and the Department of International Trade.

Although obvious commitments were made, two years after Johannesburg, it is difficult to determine what has happened in Canada as a direct result of the Summit.

4.2 The Federal Government

Through its Sustainable Development Strategies, the indicator work of the National Round Table on Environment and Economy (NRTEE), and a recent proposal for greater industry-government collaboration, the federal government is taking small but sure steps towards greater knowledge about what sustainability means in different disciplines and towards integrating sustainability practice into selected programs. As well, some progress is being made on internal education programs about sustainable development and on both working-level and Cabinet-level interdepartmental coordination and cooperation on sustainability priorities and objectives.

Sustainable Development Strategies for Federal Departments and Agencies. The third set of sustainable development strategies was tabled by 29 departments and agencies on February 16, 2004. The Commissioner of the Environment and Sustainable Development is critical of sustainability efforts of many departments for weaknesses such as “holes in accountability for environment and sustainable development, ... a lack of explicit operational objectives and targets, ... under use of sustainability decision-making tools such as strategic environmental assessment and ... an overall lack of leadership, lack of priority, and lack of will.”⁷



These are serious and well-founded criticisms, many of which can be addressed through strong leadership that insists that sustainability commitments and objectives and even Cabinet directives, such as the Directive on Strategic Environmental Assessment, are genuine, desired outcomes and cannot be ignored.

Again, though, it is important to realize that not all federal Sustainable Development Strategies share the same flaws. It is immediately apparent upon a comparison of the three sets of strategies that, over time, almost all of these strategies have become much more focused. Each subsequent set of strategies is better than the last at understanding how broad sustainability principles are linked to the mandate of a particular agency or department.

This year the Commissioner acknowledges that Industry Canada and Natural Resources Canada (NRCan) are “among the departments that have often performed relatively well” in the area of defining and delivering on environmental objectives. A review of the Sustainable Development Strategies from both departments illustrates a clear progression from general goals to targets and actions, backed up by detailed program development. Industry Canada, for example, has a number of tools to help industry move towards greater sustainability (e.g. advice on the business case for sustainability, how to report out on sustainability, how to consult with stakeholders and build partnerships). Natural Resources Canada is a leader in developing incentive programs for meeting objectives such as reductions in greenhouse gas emissions and improved indoor air quality.

The Sustainable Development Strategies illustrate that many departments continue to struggle with integrating environmental, social, and economic goals, with maximizing the benefits of stakeholder consultation and with building partnerships with organizations and agencies outside their own field. And although there has been much improvement from earlier to later versions of departmental Strategies, there is no good mechanism to ensure that learning and insights from all the Strategies are widely shared; apart from the Commissioner’s office, few read any Strategies other than their own department’s.

However, perhaps the greatest challenge is to truly integrate the Strategies into the regular priority-setting, budget-making and planning processes that departments and agencies carry out as part of their normal operations. Within departments, the Sustainable Development Strategy is still often seen as a required but separate project every three years. It isn’t usually designed to inform all regular departmental activities, building upon previous decisions and activities year by year. However, some departments are aware of this weakness, and the Canadian International Development Agency, for example, has taken steps to fully integrate its most recent Sustainable Development Strategy with its budget and corporate planning process, an important step forward.

Environment and Sustainable Development Indicators for Canada. The National Round Table on the Environment and the Economy (NRTEE), an arm’s-length advisory body to the Prime Minister, released a set of six indicators in mid-2003 designed to assist the Government of Canada to measure and report on certain dimensions of human and natural capital in Canada. The title of the report, *Environment and Sustainable Development Indicators for Canada*, is perhaps somewhat misleading in that these are neither a comprehensive set of such indicators, nor a description of all the indicators that are tracked in current reporting on environment and sustainable development in Canada. Rather, the report promotes the government’s making greater use of Statistics Canada’s System of National Accounts wealth reporting framework based on national capital assets, which include produced capital, natural capital (natural resources, land, and ecosystems), human capital, and social capital. The six indicators, five concerned with natural capital and one with human capital, are intended



to be a short, easily understood group of indicators that can be reported alongside commonly used economic indicators such as GDP. However, the six indicators are described as illustrative of this approach, rather than representing the most significant or definitive set of indicators; indeed, the report recommends adding to this set.

National Round Table on the Environment and the Economy Recommended Indicators

- Air quality trend indicator: population-weighted measure of exposure to ground-level ozone;
- Freshwater quality indicator: overall state of water quality as measured against objectives related to major water uses;
- Greenhouse gas emissions indicator: total annual emissions;
- Forest cover indicator: as measured by satellite and verified by field data;
- Extent of wetlands indicator; and
- Educational attainment: percentage of the work force with post-secondary level achievement.

These are quite basic indicators and many Canadians, no doubt, automatically assumed that the government had been tracking these trends all along. (Except for the wetlands indicator, the data for these indicators generally has been monitored, though not necessarily aggregated or reported in the suggested format.) However, it would be a positive step if, as the NRTEE has recommended, the Government of Canada assembles these indicators each year and makes use of the information for policy direction in Cabinet and reports on it in the Speech from the Throne. In the February 2004 Speech from the Throne, it was stated that:

...building on recommendations of the National Round Table on the Environment and the Economy, the Government will start incorporating key indicators on clean water, clean air, and emissions reduction into its decision making.

It is too early to tell if this is a promise that will be kept, but governments should be encouraged to do so. Part of the approximately nine million dollar expense of developing the NRTEE indicators was due to wide-ranging public involvement. The awareness gained in the process is an asset just waiting to be used to help refine and expand the indicators, particularly toward tracking important social and equity dimensions of sustainability, in addition to environmental dimensions. The NRTEE's work has already influenced the development of indicators in some municipalities across Canada.⁸

Sector Sustainability Tables. The federal government is now developing a mechanism for industry-government collaboration as part of a national framework to achieve health and environmental outcomes. While the Sector Sustainability Tables have merit, their main drawback at the early planning stage has been a weak or non-existent inclusion of community groups. Indications are, however, that this weakness is now being addressed. Grassroots organizations and community groups are important stakeholders that can bring greater understanding – and implementation assistance – to broad-spectrum sustainability program and policy development and project realization. In particular, community organizations often have a heightened awareness of economic inequities and vulnerable members of society and can therefore contribute and give meaning to the social dimension of the sustainability challenge.

4.3 Business and Industry

Corporate sustainability reporting is still the most visible work on sustainable development done by Canadian business and industry. The number of businesses producing sustainability reports is growing. A recent study



pointed to 100 companies that published sustainability reports for 2002, up from 57 company sustainability reports in 2000.⁹

Stratos and Willis also found that the link “between sustainability and annual reports has improved,” adding, “these reports are premised on a vision that links corporate sustainability and on-going success.”

Industry Canada reports a growing demand for sustainable development support from across industry sectors,¹⁰ which is why they continue to develop tools to help business implement sustainability objectives. Industry Canada also participates in research to better understand sustainability challenges from a business perspective. In particular, Industry Canada has focused on tools that support corporate social responsibility (e.g., developing principles, guidelines, codes of conduct, approaches for developing management systems and indicators, training and education, and recognition awards) and promoted a number of eco-efficiency self-assessment tools.

Small and Medium Enterprises. Larger corporations such as Suncor, the winner of numerous national and international awards since 2001 for their sustainability reporting, and Alcan, sponsor of the recent one million dollar sustainability prize for non-governmental organizations, tend to have a greater resource base – both people and funds – to allow them to take on new challenges such as sustainability. Nearly 97 percent of businesses in Canada have 50 or fewer employees. These small and medium-sized businesses (SMEs) often lack the resources of the major corporations but in the last three years there has been a significant increase in tools and information to support SMEs in moving towards greater sustainability. Examples include the Canadian Centre for Pollution Prevention’s web page devoted to smaller businesses <http://www.c2p2online.com/smep2>, and NRCan’s Office of Energy Efficiency that has programs that support businesses of all sizes. The Smart Entrepreneur Calendar (www.efficient-entrepreneur.net) identified on the Industry Canada web site as a valuable tool is also designed to assist SMEs.

4.4 Municipalities

Since 2001, many municipalities across Canada have taken steps towards better understanding of sustainability goals and objectives for their communities. Much of this work has involved extensive consultation and collaboration with the community (e.g., Sudbury’s Sustainability Plan, Vancouver’s Southeast False Creek Sustainable Policy Statement). At the same time, a growing number of sustainability implementation projects and programs have come into being in cities and towns.

Much of this is the result of a growing awareness of the value of sustainability combined with practical programs designed to achieve sustainability outcomes. One of the best examples of sustainability support for municipalities comes from the Federation of Canadian Municipalities’ Green Municipal Funds (GMF) program.

The 2003 FCM annual report on the program indicates:

Since its inception in August 2000, GMF has invested in 226 feasibility assessments and projects totalling more than \$36 million and leveraging more than \$134 million in investments for cleaner air, water and soil, and climate protection.



FCM's Green Municipal Funds Program

The Green Municipal Funds (GMF) were established in 2000 with a \$125 million endowment to the Federation of Canadian Municipalities (FCM) from the Government of Canada. The endowment was doubled to \$250 million in the 2001-2002 federal budget.

The \$50 million Green Municipal Enabling Fund (GMEF) provides grants of up to half the cost of feasibility studies (includes demonstrations and small pilots) to improve air, water and soil quality, and to address climate change.

The \$200 million permanent revolving Green Municipal Investment Fund (GMIF) helps municipal governments, and their partners, finance innovative environmental infrastructure projects.

In 2002, 60 Green Municipal Enabling Fund grants and 14 Green Municipal Investment Fund loans and pilot grants were approved, valued at \$26,437,697 and leveraging \$88,039,516 in economic activity. As a revolving fund, the Investment Fund must carefully match loans issued with loans repaid to maintain \$200 million in capital. The balance point target is 15 to 20 loans per year; at 14 projects committed in 2002-2003, the Fund is on its way to reaching this goal.

The Municipal Green Funds program is an example of how financial incentives can go a long way to moving towards greater sustainability. The fund provides matching resources and low-interest loans, not 100 percent funding, and thereby forces municipalities to decide if they want to assign some of their own resources to sustainability. And they are doing just that from coast to coast. Examples include:

- District heating with groundwater in Whitehorse and warm water thermal district heating in Haines Junction, both in the Yukon;
- Green spaces that treat greywater at University of British Columbia in Vancouver;
- Calgary's Ride the Wind program where public transit is entirely powered by wind energy;
- Green building guidelines and projects in Banff, AB;
- Mixing affordable housing with sustainability goals in the Windsong housing development in Langley, BC, in Regina, SK and in Regent's Park in Toronto, ON; and
- Integrated sustainability planning in larger urban areas such as Vancouver, BC, Hamilton, ON and Sudbury, ON and in smaller communities such as Craik, SK (population, 416).

FCM has also found that once an initial sustainability project is developed, it is very common for communities to dramatically increase their awareness of the benefits of sustainability and begin to develop more projects and programs with or without outside funding.¹¹

4.5 Research Community

The National Research Council funds work that has sustainability dimensions. Nineteen percent of 2003 funding was directed towards "environmental projects" but this does not take into account multi-disciplinary studies in other areas that may have links to sustainability goals.

The Social Sciences and Humanities Research Council does not fund sustainability as a separate program area. Newer programs, however, such as the five year Initiative on the New Economy (INE), begun in 2003,



encourages cross-disciplinary research into cultural and environmental aspects of economic development. INE also stresses the importance of community outreach and community consultation as part of the research work plan for projects in this funding category. York University is working with several universities across Canada to identify national research priorities on policy for sustainability and the environment.

5.0 What Needs to be Strengthened

There is much hope to be gained from the movement towards greater sustainability demonstrated by the above examples. We need to take steps to build on the promise these activities demonstrate. The following areas must be strengthened to ensure that we make the most of the opportunities presented by sustainability and avoid as many pitfalls as possible that would cause us to veer away from a more sustainable course:

5.1 Leadership

Who is leading for sustainability in Canada? Plans for sustainability implementation are ready to be tested. Tools such as strategic environmental assessment are available to help senior decision-makers in government take broader environmental and social issues into account during decision-making. But they are not being used. The Commissioner of Environment and Sustainable Development points out the immense importance of leadership in making the changes necessary for greater sustainability.¹²

Many policies and programs that support sustainability are developed and the framework for sustainability that exists through the federal government's Sustainable Development Strategies compares favourably with what is in place in other countries.¹³

Clearly, the Prime Minister and all Cabinet members must show greater leadership on sustainability. If sustainability is an imperative that comes from the highest levels of government – and the detailed sustainable development strategies illustrate sustainability continues to be an important consideration among federal government departments – then practical implementation steps need to be taken. With greater voice given to sustainability by senior leaders in national and local governments and in industry, the impetus to begin to deliver on desired sustainability outcomes will become a reality.

We also need to identify and support “change agents” or “champions” in all sectors of society who will take on leadership in this transition to a more sustainable future.

5.2 Priority-Setting

Where government agencies, businesses, NGOs and municipalities have been able to focus their efforts on a short list of sustainability priorities, it is easy to point to achievements. The federal government's emphasis on reducing greenhouse gas emissions – and the programs that go along with it such as Eco-Action, NRCan's energy efficiency programs, the Federation of Canadian Municipalities' Green Municipal Funds, the National Research Council's support for climate change research – has given a clear message to Canadians about the importance of the issue. Many businesses, NGOs, and individuals are now giving attention to policies, projects, and programs that focus on greenhouse gas reductions.



While it is vital to choose a short list of priorities, having only one clear priority at the federal government level is too narrow an approach. Committing to a Top Five (or possibly Top Three or Top Four) would increase understanding of what sustainability means in different fields and would help shed light on different sustainability interconnections, encouraging progress in a variety of areas. Climate change, for example, has links to so many important issues, such as the wise use of natural resources, energy efficiency, mass transit and transportation planning, public health, preparedness for new diseases and disease vectors, and economic impacts of extreme weather. A short list of sustainability priorities would also give much-needed impetus to coordination across government departments and other processes required for effective action. It would also give more direction to the sustainability priorities Canada supports internationally.

How then to go about choosing a short list of priorities? This is a necessarily political process which is for the Government to determine. It is even difficult to decide exactly how to label such priorities; we refer to them here as “themes,” suggesting that they are usually broader than single issues. Regardless of what terms are used, however, CIELAP recommends the following criteria for considering candidates for a “top five sustainability priorities” list:

- Themes that, if viewed as an investment, will have a multiplicity of benefits in the longer-term;
- Themes that, if not acted upon in the present, will have increasingly significant costs and other negative impacts in the future;
- Themes that have links with many specific issues, so that prioritizing action on them will result in many sustainability improvements; and
- Choosing one theme that may be more limited in scope than the others, but where effective action will have a highly visible, inspiring and symbolic impact.

As a suggested set of sustainability priorities that meet these criteria, CIELAP recommends the following themes:

- The Kyoto Accord (climate change);
- Poverty and deprivation in children (includes early childhood education, health concerns, and high quality daycare);
- Cities (includes public transit and environment-related infrastructure);
- “Greening” Canadian innovation and competitiveness; and
- Homelessness.

5.3 Process

Examples from across the country and around the world indicate greater sustainability often results from bringing together people with different perspectives and experiences to sort through a tough sustainability problem. The most successful federal government Sustainable Development Strategies and corporate sustainability activities include stakeholders from a wide range of backgrounds. How can we see more of this?



Value in the Process of SDS Development

Industry Canada has found that the process of developing the Sustainable Development Strategy (SDS) has increased understanding of sustainable development within the department. Over the years, more and more people are discovering that each office and branch of Industry Canada has something to contribute to the strategy. By the end of the third round of SDS development there is much greater awareness of sustainable development and how Industry Canada can help move towards achieving it.

Tom Van Camp, Director Strategic Policy Branch of Industry Canada, October 19, 2004

Sustainability Round Tables. The environment and economy round table model of the late 1980s and early 1990s was designed to provide a forum for providing information to leaders on basic sustainability issues such as simultaneously moving forward on social, economic, cultural and environmental fronts. By the mid-1990s, most provinces had environment and economy round tables. However, over a decade later only Manitoba has such a round table, now called the Manitoba Round Table for Sustainable Development.

The National Round Table on the Environment and the Economy tends to focus on environmental issues as opposed to broader sustainability issues. The lack of round tables at the provincial level means that many provinces do not have a forum to build in-depth understanding about what sustainability means to that particular province, or for brainstorming about exciting options and partnerships for building greater sustainability.

Early Integration. Initiatives that build in sustainability principles from the very beginning, perhaps understandably, illustrate the greatest number of sustainability benefits. This is immediately apparent in activities such as infrastructure and community design where the use of an integrated design process that brings planners, builders, architects and engineers together from the initial project conception consistently results in better environmental and social responsibility, coupled with a more efficient use of finances. Adjusting business-as-usual plans at a later stage to include sustainability considerations is much more expensive than incorporating sustainability principles from the start.¹⁴

This approach is valuable for many different types of undertakings including community design, environmental assessment, program and project development, and major granting initiatives.

Consultation. Stakeholder consultation can be a very time consuming and, occasionally, a seemingly disorganized endeavour, but it is a tried and true way of generating innovative ideas and responses, and forming new partnerships to support sustainability. Creative and interactive consultation and collaboration – as opposed to information sessions held to inform stakeholders about the current state-of-play of an initiative – also help inform those who are potentially affected and interested in an undertaking about the complexity of the sustainability challenge.

Coordination. Another essential dimension of sustainability is coordination across departments and areas of expertise to maximize input and creativity to assist in reaching sustainability goals. Currently, there is little evidence of such coordination within local and provincial governments, Manitoba being one exception. Only now are we seeing recent efforts to improve coordination across federal departments.



This is admittedly difficult within the structures of a parliamentary government like Canada's. Influence and resources are a matter for competition among Cabinet ministers and their departments, and open discussion and argument within the government are considered one strength of a parliamentary system. As well, accountability is in part based on having clear mandates and areas of responsibility within a bureaucracy or institution.

However, this separation can work in opposition to finding blended sustainability solutions. Departmental competition for funding and support can exacerbate the threat of ignoring important multi-benefit outcomes in favour of taking full credit for a more limited, one-dimensional success. Rather than an adversarial situation where social programs compete with environmental programs which in turn compete with paying down the national debt, a sustainability approach is based on the premise that somehow, new mechanisms must be found to promote innovative policies and initiatives that lead, at the same time, toward all or many of the desired outcomes.

The Commissioner of the Environment and Sustainable Development¹⁵ observes that the deputy ministers' Environment and Sustainable Development Coordinating Committee is "falling short of its potential" for leading and coordinating sustainable development within the federal government. Many of Canada's major urban centres are also lacking strong coordinating functions for sustainability. A central coordinating body with a strong mandate to support and implement sustainability has been linked to progress on sustainability in other jurisdictions such as London, England; Melbourne, Australia; Portland, Oregon ; Berlin, Germany; Barcelona, Spain; and Stockholm, Sweden. Governments at all levels in Canada should consider the value of giving responsibility for encouraging and delivering on sustainability to a coordinating agency within government that has support from the highest level of decision-makers along with resources and shorter and longer-term timelines for achieving agreed-upon sustainability targets.

The federal Minister of the Environment, Stephan Dion, recently acknowledged the importance of integration, saying, "countries that fail to integrate both environmental and economic factors will not position themselves well to improve, or even to maintain, the quality of life of their people."¹⁶

5.4 Funding and Other Resources

Funds and resources must be available to assist with sustainability implementation of all types. A fundamental tenet of sustainability is the need to involve stakeholders who hold different perspectives in the planning, designing and implementing of sustainability initiatives. Broad collaboration is more likely to result in responses that mirror real world conditions and, therefore, greatly increase the viability of sustainability plans and projects. It is difficult for non-governmental organizations and community groups to participate in developing federal and local sustainability initiatives without any financial support to cover the costs of their time and, in some cases, travel. Their input is important. They bring to the table experience and knowledge that differs from staff in government agencies and research institutions. Funds should be made available to ensure their full involvement.

Major sustainability projects often have an element of experimentation, which can sometimes increase risk and liability but, at the same time, can increase the likelihood of innovation. Taking bold new steps is part of strengthening sustainability. Funding needs to be available to cover the incremental costs between a status quo approach and shifting away from business as usual.



The federal government recently announced it expects more than a nine billion dollar surplus.¹⁷ Diverting even a small part of this surplus to the following objectives would go a long way to seeing Canada move to join the ranks of global sustainability leaders:

- Support more community and NGO participation in sustainability initiatives;
- Increasing coverage of the perceived and real increment between conventional and sustainability approaches through programs like FCM's Green Municipal Fund; and,
- Providing dollars to programs and projects within the federal government's Sustainable Development Strategies that are designed to integrate sustainability into management and operations in a very tangible way.

5.5 Knowledge to Support Sustainability

Science, Monitoring, and Reporting. In 1990, at the G-7 summit, Canada offered to play a lead role in developing a set of environmental indicators, and as part of that commitment sponsored a major international conference in Montreal in 1991 on Environmental Information for the Twenty-First Century. An important conclusion from that conference was that the scientific monitoring capability around the world was seriously deficient in being able to provide scientists, governments, and citizens with accurate environmental information on which to base policy decisions and other actions. Well over a decade later, the National Round Table's *Environment and Sustainable Development Indicators for Canada* report states:

One of the most important findings of the ESDI Initiative is the surprisingly poor quality of much of Canada's national-level environmental information.... Because of the lack of sufficiently comprehensive, coherent, current, and authoritative data, it is not possible to report with confidence on various indicators (p.44).

Science is a particularly easy target for governmental budget-cutting because its constituency is small and its immediate results are generally invisible to both politicians and the public. Nevertheless, science and good information systems are the essential starting points for environmental protection and sustainable development, and governments must ensure that the resources are there to do the job. It is not encouraging that Canada's program on the state of environment reporting and indicators – which in the past involved some of the most intellectually sophisticated and robust approaches in the world – has been substantially reduced over the last dozen years, not only in resources but, it appears, in its perceived significance.

Although the topic of coordination is addressed elsewhere in this paper, it is also important to emphasize that better mechanisms for knowledge about what is working and not working and about who is doing what – in government agencies, in industry and in NGOs – would speed up Canada's sustainability response, decrease duplication of effort, and make better use of resources that are available to support sustainability.

Understanding the Financial Benefits of Sustainability. Work in the area of energy efficiency has made it abundantly clear that there are financial benefits to pursuing sustainability approaches. In the fields of project planning and urban and building design, tools put forward by agencies such as the Canadian Mortgage and Housing Corporation and the Federation of Canadian Municipalities are helping to identify the financial, often long-term benefits of choosing a sustainability approach over a more conventional approach. NRCan has also made important contributions in this area.



5.6 Innovation and Competitiveness

The link between sustainability, innovation and creativity has been acknowledged by many scholars and sustainability practitioners and recently by the federal Minister of the Environment:

The clear connection between environmental considerations and economic competitiveness is leading a transformation of the way the global economy works. More and more, we see the signs of what can only be described as a new Industrial Revolution – a revolution in which the environment is a key driver of creativity, of innovation and of competitiveness around the world.¹⁸

Innovation also implies the need for increased understanding of basic and applied science. This is particularly the case when innovation involves new technologies such as biotechnology and nanotechnology. There is a need for basic scientific knowledge and research along with ongoing monitoring. Part of sustainability is knowing what is happening in the environment. Therefore, science and research has to be recognized as an integral part of innovation.

Sustainability is directly linked to innovation and competitiveness since

- Innovation goes hand-in-hand with sustainability because sustainability demands finding new ways of doing things, thus prompting a shift away from conventional approaches;
- Bringing a diverse group of players to work on an issue greatly increases the opportunities for an innovative response as ideas and experience from a variety of fields come together in new ways to form partnerships around a common goal; and,
- New forms of collaboration help initiate innovative responses. Pulling together knowledge from seemingly disparate areas such as corporate management and environmental disciplines, and systematically analysing what emerges, can help catalyze innovation in government, in the private sector, in universities, and in communities.

Increasingly, all sectors within the Canadian economy are turning to innovation as a way to meet the continuing sustainability challenge. An innovative response to sustainability is not only driven by the need to be competitive internationally but also because it is often a more efficient and effective approach to managing and operating a business. According to the President and CEO of Sustainable Development Technology Canada (see text box) the number of requests for support for technical innovation to meet the sustainability challenge in Canada is growing:

Since its inception three years ago SDTC has been inundated with almost 900 applications for funding that represents over \$6B in total project opportunity. Over 80% of the applicants' consortia have been led by industry showing that they have a commitment to work with SDTC to address climate change and clean air and that Canada possesses substantial capacity in the form of entrepreneurs who have innovative ideas for new environmental technologies. Industry may not be motivated by reducing its environmental footprint but if there are clean technologies that save costs or turn waste streams into revenue sources, both of which will contribute to productivity, competitiveness and profit, then the outcome is better for all, whether it be the industries in particular, or the Canadian society at large.¹⁹



Sustainable Development Technology Canada²⁰

To date, SDTC has allocated a total of \$89 million to 46 projects. That amount has been leveraged with an additional \$254 million in funding from other project partners for a total project value of \$343 million. These technologies are applicable to energy exploration and production, power generation, transportation, agriculture and forestry, waste management and all three of the energy utilization sectors: industrial, commercial and residential.

Sustainable Development Technology Canada STDC is a foundation created by the Government of Canada that operates a \$350 million fund to support the development and demonstration of clean technologies that address issues of climate change, clean air, water quality and soil. These solutions deliver environmental, economic and health benefits to Canadians. An arm's length, not-for-profit corporation, SDTC works with private, financial, academic and public sectors and with the Government of Canada to build a sustainable development technology infrastructure in Canada.

6.0 Conclusions and Summary of Recommendations

Our research has shown there is real progress on sustainability in Canada and that it can be found in many different forms, from inspired policy statements, to innovative partnerships and funding programs, to hands-on community projects and beyond. CIELAP proposes building on and learning from the examples of sustainable development initiatives documented here and addressing the weak nodes of sustainability practice, such as leadership and priority-setting.

The following recommendations from CIELAP's *Sustainable Development in Canada* (2001). They are still pertinent:

- Focus on a short list of priorities;
- Set short-term objectives with clear timelines;
- Track the outcomes of sustainability initiatives, not just the input of resources or the development of programs; and
- Test for the actual contribution to sustainability of the chosen goals, objectives, programs and other initiatives.

In addition, this *Update* has illustrated that a shift to greater sustainability is predicated on a number of very clear conditions, all of which need additional support and attention in the Canadian context. While all are important, the first three are particularly urgent:

- Strong leadership at all levels, especially from the Prime Minister and Cabinet;
- A mechanism or process, determined by the Government, to set a short list of sustainability priorities, with criteria for the list that include:
 - _ Significant long term benefits;
 - _ Increasing long-term costs and risks if not dealt with in the present;
 - _ Linkages to many specific issues, reinforcing positive action; and
 - _ At least one priority that has strong symbolic and inspirational value.



CIELAP's Sustainability Priority List

- The Kyoto agreement;
 - Childhood poverty and deprivation, including early education and daycare;
 - Cities, especially public transit and environmental infrastructure;
 - “Greening” Canadian innovation and competitiveness; and
 - Homelessness.
-
- Increased attention to more effective cooperation and coordination among government departments and at all levels of government;
 - Sustainability education and experience for all government employees, not just a select group identified to develop a departmental Sustainable Development Strategy or work on its implementation;
 - A better understanding that sustainable development goals are more than a set of goals for sound environmental management, along with greater analytical efforts to develop a useful sustainability framework for social and economic development goals;
 - Continuation and expansion of the trend in sustainability strategies and planning from general commitments to specific programs;
 - Broad and ongoing consultation on sustainability initiatives that includes grassroots and community groups with other stakeholders, and the resources to ensure that such groups are able to participate;
 - Increased support for science, environmental and sustainability monitoring, reporting, and systems for learning and knowledge dissemination;
 - Unconventional partnerships to better understand the integrative dimension of sustainable development and to stimulate innovation. For example, across disciplines – psychology and environmental science; between organizations – management school and environmental NGOs; across sectors, – energy and education.

Footnotes

¹ Canadian Institute for Environmental Law and Policy 2001. *Sustainable Development in Canada: A New Federal Plan*.

² 1987 United Nations Commission on Environment and Development. *Our Common Future*. Oxford University Press.

³ 1987 United Nations Commission on Environment and Development. *Our Common Future*. Oxford University Press.

⁴ SustainAbility Ltd, United Nations Environment Programme (2001) *Buried Treasure: Uncovering the business case for corporate sustainability*. London/Paris

⁵ From a per capita average of 5 tonnes per year to 4 tonnes per year. This figure is still high compared to many other countries.

⁶ Federal/Provincial/Territorial Biological Diversity Working Group. Draft Number 2 (2003) *Vision and Framework for a Canadian Biodiversity Index*

⁷ Commissioner of the Environment and Sustainable Development (2004). Report of the Commissioner of the Environment and Sustainable Development

⁸ Doug Pollard, Senior Sustainability Advisor, FCM, personal communication, September 29, 2004

⁹ Stratos in collaboration with Alan Willis and Associates (2003). *Building Confidence: Corporate Sustainability Reporting in Canada*.

¹⁰ Tom Van Camp, Sirector of Sustainability with the Strategic Policy branch of Industry Canada, October 19, 2004

¹¹ Personal communication, Doug Pollard, Senior Sustainability Advisor FCM, September 29th, 2004.

¹² 2004 Report of the Commissioner of Environment and Sustainable Development

¹³ Stratos 2002

¹⁴ Mike Singleton, President Sustainable Buildings Canada, Personal communication, August 14, 2004.

¹⁵ 2004 report

¹⁶ The Honourable Stéphane Dion, Minister of the Environment Environmental action for economic competitiveness: Will Canada lead the new Industrial Revolution? Speech Calgary Alberta, September 10, 2004

¹⁷ *Globe and Mail*, November 17, 2004.

¹⁸ The Honourable Stéphane Dion, Minister of the Environment Environmental action for economic competitiveness: Will Canada lead the new Industrial Revolution? Speech Calgary Alberta, September 10, 2004

¹⁹ Vicky Sharpe, President and CEO SDTC, personal communication, October 29, 2004.

²⁰ Information taken from Sustainable Development Technology Canada 2003 SDTC Annual Report and November 2004 website.

Appendix A

Overview of Analyzing and Creating Sustainable Development Initiatives

CORE VALUES, equally and simultaneously	<ul style="list-style-type: none"> • Human well-being 	<ul style="list-style-type: none"> • Ecological health and integrity
DRIVING CONCERNS, equally and simultaneously	<ul style="list-style-type: none"> • Meeting human needs that are mediated through <ul style="list-style-type: none"> – social & – economic development 	<ul style="list-style-type: none"> • Avoiding new negative anthropogenic changes & reversing past damages to the environment, including <ul style="list-style-type: none"> – chemical – physical & – biological changes
CORE AREAS for FOCUS and ACTION	<ul style="list-style-type: none"> • Social • Economic 	<ul style="list-style-type: none"> • Environmental
POLICY FRAMEWORKS and GOALS	<ul style="list-style-type: none"> • No widespread consensus on framework for social & economic topics & goals • Topics used in many approaches include <ul style="list-style-type: none"> – Population/demographics – Human health and its determinants, such as food security & nutrition; shelter; sanitation – Literacy/education – Security, crime & corruption – Basic human rights, equality & democratic rights – Income, employment – Competitiveness & innovation 	<ul style="list-style-type: none"> • Widespread use of the World Conservation Strategy framework for environmental topics & goals <ul style="list-style-type: none"> – Maintenance of essential ecological processes and life support systems (addresses pollution & waste) – Preservation of genetic diversity (addresses habitat loss, invasive non-native species) – Sustainable utilization of species & ecosystems (addresses rates of harvesting & extraction)
CHECKLIST of CONSTRAINTS on ACTIONS & INITIATIVES in order to integrate goals	<ul style="list-style-type: none"> • All actions & initiatives must <ul style="list-style-type: none"> – Be effective – Take into account environmental constraints (minimize waste & pollution; minimize habitat impacts of physical restructuring & avoid biological restructuring; restrain harvesting & extraction to sustainable levels) – Be economically sustainable (allocate or generate sufficient resources for the anticipated lifetime of the project or initiative) – Be socially responsible (improve or at least maintain the position of the most vulnerable group affected) – Be equitable (distribute costs, benefits & risks equitably) 	



Notes

- The decision flow described in this OVERVIEW chart is as follows: an actor (a policy analyst, a manager, etc.), accepting the **core values** of sustainable development, might want or be mandated to act on its **driving concerns**. Depending on circumstances, a proposal (a policy, program, or other action) within one of the core areas is developed to address **goals or objectives for one or, if possible, several topics** (pollution control or literacy, for example) within the overall **sustainability framework**. But however brilliantly that proposal addresses its main objective(s), all actions have a variety of unintended consequences, environmental, social, and economic. The proposal must therefore be reviewed and perhaps revised in light of how the **constraints** related to all dimensions of sustainable development affect its various implications.
- Social, economic, and environmental domains used as a sustainability framework are often referred to as the “Three Pillars” of sustainable development. Occasionally social and economic areas are considered together as the socio-economic domain. Political and governance dimensions are usually encompassed in the social (as here), but are sometimes broken out as a “Fourth Pillar.”
- Some analysts might consider efficiency as an additional basic constraining criterion. We place it as part of the general design criteria for good programs, such as ease of administration; these considerations are instrumental and operational, not fundamental. In a sustainable development context, economic efficiency as a substantive objective can be trumped by the above social, environmental, or equity considerations.



Appendix B: Some Definitions of Sustainable Development

- *Our Common Future*, The World Commission on Environment and Development (the Brundtland Commission), Oxford University Press, Oxford: 1987:

Development which seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future.

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- From the Introduction to *Pathways of Sustainability*, edited by Tony Hodge, Susan Holtz, Cameron Smith, and Kelly Hawke Baxter, published by the National Round Table on the Environment and the Economy, Ottawa: 1995:

The concept of sustainability is best defined as “the persistence over an apparently indefinite future of certain necessary and desired characteristics of both the ecosystem and the human subsystem within.” Sustainability is a normative attribute of something, such as the ecosystem, biodiversity, development, communities, the nation, the family farm, or society. Sustainability of development – or sustainable development – focuses on human activities and on related development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

* * * * *

- “Reconciling Ecological, Economic, and Social Imperatives,” by John Robinson and Jon Tinker, from their chapter in *The Cornerstone of Development*, edited by Jamie Schnurr and Susan Holtz, co-published by the International Development Research Centre: Ottawa and Lewis Publishers: Boca Raton, 1998:

...sustainable development [is] the reconciliation of three imperatives:

- The ecological imperative to remain within planetary biophysical carrying capacity;
- The economic imperative to ensure and maintain adequate material living standards for all people;
- The social imperative to provide social structures, including systems of governance, that effectively propagate and sustain the values that people wish to live by.

* * * * *

- *Defining Sustainability, Sustainable Development and Sustainable Communities: A Working Paper for the Sustainable Toronto Project*, unpublished, January 2002:

Sustainability is an approach to decision-making that incorporates the interconnections and impacts of economic, social, and environmental factors on the quality of life of today’s and future generations. It is a dynamic and evolving notion, and as a process it strives to be participatory, transparent, equitable, informed, and accountable.

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- From the *2004-2006 Sustainable Development Strategy for the Canadian International Development Agency (CIDA)*. CIDA contextualizes its definition of sustainable development by noting that its departmental mandate is to support sustainable development in developing countries and countries of transition, so that:

For CIDA, sustainable development is development that is equitable and environmentally sustainable and that strengthens the economic, social, environmental, and governance capacity of women and men, girls and boys.

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- Slightly modified from Health Canada's *2004-2007 Sustainable Development Strategy: Becoming the Change We Wish to See*:

For sustainable development to be successful, the “three pillars of sustainable development” – the natural environment, society and the economy – must be effectively integrated so that individuals, governments and organizations can take action to promote a healthy natural and built environment, a vibrant and just society, and a prosperous economy for current and future generations. The challenge is to identify linkages between these three interconnected pillars of sustainable development, and develop policies and tools that avoid trade-offs between and among them. Sustainable development requires integrated approaches to decision-making that reflect

- A long-term approach, seeking to improve the quality of people's lives today while ensuring a continuing legacy for the future;
- A focus that fully incorporates environmental, social/cultural and economic factors while seeking to avoid trade-offs; and
- A recognition of the interdependence between local, regional, national and global activities.

