

**SUSTAINABLE DEVELOPMENT:
A PARLIAMENTARY FORUM**

**Jean-Luc Bourdages
Science and Technology Division**

July 1997



Library of
Parliament
Bibliothèque
du Parlement

**Parliamentary
Research
Branch**

The Parliamentary Research Branch of the Library of Parliament works exclusively for Parliament, conducting research and providing information for Committees and Members of the Senate and the House of Commons. This service is extended without partisan bias in such forms as Reports, Background Papers and Issue Reviews. Research Officers in the Branch are also available for personal consultation in their respective fields of expertise.

**CE DOCUMENT EST AUSSI
PUBLIÉ EN FRANÇAIS**

TABLE OF CONTENTS

	Page
INTRODUCTION.....	1
THE SCOPE OF SUSTAINABLE DEVELOPMENT.....	2
DUTIES AND RESPONSIBILITIES TO BE ASSUMED BY ALL.....	3
GLOBAL AND LOCAL CHALLENGES	4
POLITICAL ACTION AT VARIOUS LEVELS	7
WAYS OF ACHIEVING SUSTAINABLE DEVELOPMENT.....	11
A. Information.....	11
B. Education.....	12
C. Getting Everyone Involved.....	13
D. Participation in Decision-Making	13
E. Role of the Government.....	13
F. Integrating Health, the Economy and the Environment.....	14
G. Sectoral Issues	15
1. Energy	15
2. Water	15
3. Waste.....	16
4. Construction	16
5. Transportation	17
CONCLUSION.....	17



CANADA

LIBRARY OF PARLIAMENT
BIBLIOTHÈQUE DU PARLEMENT

SUSTAINABLE DEVELOPMENT: A PARLIAMENTARY FORUM

INTRODUCTION

From 13-14 May 1996, the Sub-Committee on Environmental Awareness for Sustainability of the House of Commons Standing Committee on Environment and Sustainable Development held a Forum designed to increase parliamentarians' knowledge and raise their awareness with respect to introducing sustainable development into their communities. The Forum, on the theme of "Jobs, the Environment and Sustainable Development," gave parliamentarians an opportunity to talk to experts, business and community representatives, young people, native people and environmentalists on the many aspects of sustainable development.⁽¹⁾

The forum included exchanges through round tables on specific themes. An initial meeting⁽²⁾ looked at general questions relating to sustainable development. Participants from various backgrounds presented practical examples of sustainable development in three thematic meetings, the first on waste management,⁽³⁾ the second on the prevention of pollution⁽⁴⁾ and the third on energy.⁽⁵⁾ Intervening parties were then invited to elaborate on various aspects of their initiatives, such as the reasons and incentives for their implementation, their environmental benefits, the cost of implementing them, and direct and indirect economic spin-offs, for example, with respect to job creation.

-
- (1) At the same time, forum participants were able to view an exhibition organized by the Canadian Environment Industry Association in co-operation with the Department of the Environment which presented a number of concrete sustainable development initiatives.
 - (2) Joint meeting of the Standing Committee on Environment and Sustainable Development and the Sub-Committee on Environmental Awareness for Sustainability, *Testimony*, Meeting No 4, Monday, 13 May, 1996.
 - (3) *Ibid.*, Meeting No 5, Tuesday, May 14, 1996.
 - (4) *Ibid.*, Meeting No 6, Tuesday, May 14, 1966.
 - (5) *Ibid.*, Meeting No 7, Tuesday, May 14, 1996.

This paper provides a brief description of the main issues discussed during the forum, grouped according to five themes: the scope of sustainable development, the duties and the accountability of each and everyone, the global and local challenges, concrete actions taken at various levels, and the principal means of achieving sustainable development.

THE SCOPE OF SUSTAINABLE DEVELOPMENT

The first meeting of the forum gave the participants and parliamentarians an opportunity to discuss sustainable development in general terms and to clarify the concept. In the attempts to define what sustainability is or ought to be, the principle that was probably repeated most frequently was equity. This was primarily taken to mean equal sharing among the various generations as well as within a single generation. Thus, the concept of sustainable development implies the goal that everyone, in both present and future generations, will have equal access to the available resources. The native view of sustainable development is more a question of balancing the needs of the present generation with the needs of those who will come after us. Thus, in order to ensure the survival of humanity, it is essential that those sharing out the resources should be concerned with their neighbours on this planet and assure them of a greater share of its resources. For example, it is accepted by many that industrialized societies should lower their expectations, consume less energy and in general waste fewer resources.

Over the last 15 years or so we have witnessed the beginning of a great change in business behaviour, especially in the industrialized countries. The change was prompted by the Brundtland Report and the movement that led to the Earth Summit in 1992. This movement, taking concrete form primarily in terms of environmental management and protection, has given rise to a wide range of approaches. For example, over the last 20 years or so, the Canadian pulp and paper industry has made extensive technological progress, especially in recycling and waste treatment.

Forum participants stressed that sustainability must not be restricted purely and simply to environmental management, however, but must also focus on justice and respect for others. Moreover, they felt that the concept has economic, social and environmental implications, several examples of which were described:

- the cost of upgrading water and sewer systems;
- the increase in lung ailments in major cities, requiring ever-greater amounts of money for treatment;
- the loss of traditional jobs but, at the same time, the creation of new jobs, as is the case in the ecotechnology sector;
- the reduction in international development assistance, which tends to undermine the principle of fairness, regarded as one of the three pillars of sustainability;
- various problems linked to water and air pollution, the production and elimination of waste, and climate change.

A number of participants noted that environmental education was one of the main solutions to these numerous problems.

DUTIES AND RESPONSIBILITIES TO BE ASSUMED BY ALL

During the forum, it was pointed out that sustainability involves several levels of responsibility. The survival of the environment depends on people themselves, in the sense that it requires a change in behaviour to promote the active commitment and participation of all. In this regard, the native participants felt that sustainability included spheres of responsibility at an individual level. Even in business, each employee has responsibility for the prevention of pollution and environmental management.

Forum participants stressed that it is especially reassuring to see the impressive results of community action, because this is the level at which ways of thinking are most likely to change and action is most likely to be taken. On the other hand, as far as industry is concerned, participants had to admit that the companies that are most concerned about the conservation of resources, effectiveness and productivity tend to produce more efficiently and are more competitive both in Canada and abroad.

Participants felt that governments, especially the federal government, could be highly influential with respect to accountability, by setting an example and displaying strong leadership, even though they cannot always act in such concrete ways as communities. A specialist on energy questions even gave an example of incentives and more coercive measures

that Parliament could implement to promote the increased use of public transit by its many employees. The problems caused by the fact that parking on Parliament Hill is free have often been noted.

GLOBAL AND LOCAL CHALLENGES

Forum participants mentioned that, on the international level, the state of the environment with respect to air, soil and water pollution is not very positive, especially with respect to the indexes developed by the OECD. As far as the redistribution of wealth is concerned, they pointed out that international development assistance is declining, which tends to undermine the principle of fairness. They also said that the gap between what is said and what is done is growing wider all the time. If no heed is paid to the environment, the headlong pace of economic growth currently typical of Asia, especially China, may well undermine world-wide efforts to implement sustainable development on a global scale. In the sensitive area of climate change, which is the subject of an international agreement, only a very few countries are actually attempting to meet their commitment.

A number of environmental problems were noted in connection with industrial activities: the survival of natural northern and coastal forests, the future of tree plantations, the protection of fresh water and its long-term availability, the emissions responsible for climate change and the depletion of the ozone layer, and the exhaustion of resources generally, especially in the fisheries and agriculture.

Forum participants felt that the status of the environment in Canada was also of concern. They pointed out, for example, that Canadians' consumption of water is twice as high as that of Europeans. Over the next ten years, it is expected that Canada will have to spend tens of billions of dollars to upgrade water and sewage systems. An effort to reduce water consumption by one-half, which would bring us to the European level, would not only allow us to save this huge financial outlay but would also considerably reduce the amount of effluent requiring treatment.

Participants also noted that Canadians are among the largest, if not the largest, producers of waste per capita in the world, primarily because there is no incentive to make any effort to reduce our garbage. Four problems with waste management were noted by one speaker: first, the concentration of waste disposal in certain areas; second, the lack of waste disposal technology that has no impact on the environment or the community; third, the fact that individual

citizens do not necessarily have input into the decision-making processes that affect their day-to-day lives; and fourth, the squandering of resources, as seen in the disposal of waste in landfill sites rather than recovering the waste or attempting to reduce it at source. Yet, reduction at source and recovery are inherent in the prevention of pollution, and are essential components of sound environmental management.

Forum participants were of the view that transportation poses serious challenges for the environment. Some people saw society as being in a trap because our towns and villages were built and developed essentially around the car, and on the basis that goods would be transported by truck, to the extent that it has sometimes become impossible to contemplate alternatives. An investigation conducted for Environment Canada in eight federal organizations in Ottawa and Toronto confirmed that approximately 43% of the concentration of CO₂ resulted from emissions produced during travel between the home and the workplace and that three-quarters of this amount came from cars with only one occupant.

It was noted that Canadians use 30% more energy than necessary. One of the reasons for this over-consumption is certainly the fact that the cost of different types of energy is relatively low in Canada and in North America generally. Another factor is that the prices charged to consumers do not reflect true production costs. In Quebec, for example, analyses have shown that residential customers pay approximately 70% of electricity production costs, industrial customers 75% and commercial clients 93%. The energy costs of a small industrial or commercial business account for about 5% of total operating costs. Because these costs do not really stand out from other overhead costs, it is difficult to give this issue the attention it deserves. The situation is all the more regrettable when we realize that small business as a whole generates a large part of Canada's economic activity and generally consumes a large part of its energy. Some studies have shown that in small and medium-sized businesses the interest in environmental and energy questions is fairly high but that there are also many other priorities in the competition for the domestic resources available.

While most people support the objectives of sustainability, it will be difficult to meet them in the current socio-economic context. There is a tendency to make decisions not on the basis of scientific knowledge or in the context of major environmental problems such as climate change but rather on the basis of social and economic factors. As one participant pointed out, implementing sustainable development will be particularly difficult because the inevitable societal changes and transformations will be so much more far-reaching than people are expecting.

Concerns about jobs were also raised at the forum. Some felt that sustainable development could perhaps lead to the loss of jobs in one sector, but to the creation of jobs in another. This may be a particularly sensitive issue for an MP, who is already trying to deal with employment problems at the local level. However, some job losses are inescapable since jobs are created or eliminated when new technological processes are introduced, or demand fluctuates. Some economists attending the forum felt that if we give the environment the importance it deserves, more jobs are likely to be created as the economy becomes increasingly efficient. For example, by moving away from the capital-intensive non-renewable resource sectors and turning toward the renewable energy or recycling sectors, new jobs could be created primarily as a result of the labour-intensive procedures associated with recycling, for example, and also because of efficiency gains resulting from more realistic pricing policies. Some participants felt that the environment-related job-losses are minimal in comparison with those in other sectors, for example, losses resulting from free trade, deregulation, bankruptcies, the crash of the real estate market, and so on. Nor did they assume that setting higher environmental standards than those of our competitors would inevitably make us less competitive, as some have suggested.

Participants stated that the actions of governments are also of fundamental importance in implementing sustainable development since it is often this decision-making level that requires co-ordination and expression of a genuine desire to act. The Rio Earth Summit in 1992 certainly made it possible to deepen our thinking, to establish a dialogue and to propose concrete ways to create a broad partnership that would move towards a planetary vision of society. While governments always seem to be concerned about what future generations may expect in terms of environmental management, some observers felt that, barely two years after the Rio Summit, the political commitment had evaporated, especially in Canada. The current situation in Canada led some to maintain that this country is no longer the international leader it was before and during the Earth Summit and now lags behind countries such as Japan, Germany and France. In their view, a different tack is urgently required!

PRACTICAL ACTION AT VARIOUS LEVELS

Participants in the forum were told of a number of very practical sustainable development initiatives, involving community organizations as much as small and large business and governments.

Among the concrete achievements noted in the forum's thematic meetings, were policy changes implemented by a landscaping firm which illustrate the potential for environmentally friendly approaches. In 1989, despite a turnover of some \$5 million in landscaping contracts using traditional methods, the Edmonds Company in Halifax decided to change direction entirely and adopt organic methods, avoiding the use of pesticides and chemical fertilizers. Since then, the company's use of chemicals has dropped by 80% and 150 new workers have been hired. Throughout North America, only 5% of the landscaping industry, which overall has a business turnover of \$4.5 billion, uses organic products. However, because of the growing public concern about the impact of chemicals on health, organic horticulture and landscaping are growth industries.

A number of interesting initiatives with respect to waste management and recycling were presented to the parliamentarians. On a corporate level, the parliamentary precinct's "Green Hill" program is an impressive example of individual efforts making up a collective project. This program, which was introduced in the 1980s, has now made it possible to put to other uses a large portion of the waste previously destined for landfill. It has been estimated that recyclable materials make up approximately 90% of the waste produced on Parliament Hill; 50% of this is paper, 25% is organic compostable material, and 25% is plastic, glass, metal, textiles, wood and composites. As a result of a partnership with Restaurant Services, the amount of material composted increased from 720 kg to 3,813 kg between March 1995 and March 1996. Since the program began, more than 4,250 tonnes of paper have been recovered, earning revenues of approximately \$140,000. A new component of the program, implemented in the Wellington Building, is designed to eliminate waste completely, as Bell Canada has done in some of its office buildings. After only three months, the results of this new project have been impressive, according to those in charge. It is the parliamentarians and employees who, with the appropriate tools, training, and information, are really the key to this success story.

Forum participants heard about another model initiative that resulted from a close partnership between a municipality and a community group - the *Comité pour l'amélioration et la*

protection de environnement (CAPE) in Baie-Comeau, Quebec, a community organization that is involved primarily with waste management, environmental education and the protection of the St. Lawrence River. In the case of waste management, the emphasis is not only on selective collection and recovery but equally on reduction and reuse. Emphasis is placed on the fact that landfill sites are full of products that can be repaired and reused. A centre (“*Ressourcerie*”) has been established to reduce, repair, recover and recycle as much material as possible with the participation of active community organizations, the general public, institutions, associations and businesses. This project has led to the creation of seven permanent jobs and 40 other jobs that are subsidized with a view to reintegrating the incumbents into society. Results range from the recovery and reuse of windshield washer containers, to collection of telephone directories and Christmas trees, to cleaning up the riverbanks by collecting 540 tonnes of material, 90% of which could be recovered. These are actions that go beyond mere recycling and cover the environmental “3Rs.”

Participants were also told about the remarkable things being done in schools, thanks to the active involvement of both students and teachers. For example, at Sir Winston Churchill School in Ottawa, a “green team” approach has been set up to focus on four aspects of the environment. One group suggested garbage-free meals to reduce the amount of waste. A second group promoted recycling by introducing a blue-box program in each classroom. Another team concentrated on restoring animal and plant life to the schoolyard, by installing bird-feeders, for instance. The fourth group was responsible for composting.

Several examples of sustainable development requiring advanced technologies have come from industry. A rather unusual initiative involved the recycling of disposable diapers, using a process developed by Know Waste Technologies. This company collects diapers from 170 institutions between London and Ottawa. After the various components are separated out and treated, high-quality paper pulp is produced as a residual product and is subsequently sold to paper producers.

Similarly, Canadian Plastic Lumber purchases some 1,500 tonnes of used plastic and uses it to make synthetic wood. This is a high-quality, extremely durable product that can be used as a good substitute for lumber in various construction projects.

In more traditional sectors, such as the pulp and paper industry, Avenor is working on developing a “zero effluent discharge” process in one of its newsprint plants. In fact, the process involves a closed-circuit system in which the effluent is re-used after it has been treated.

This technology should make it possible to reduce pollution at the source substantially by re-using water, fibres, chemicals and energy. Initially, the idea for re-using the effluent came from some employees who noticed that the company's new secondary treatment system was remarkably efficient in treating effluent. The ultimate challenge for industry is to speed up the introduction of such closed-circuit systems.

Other examples of sustainable development come from the energy sector. The Solar Industries Association of Canada has for a decade or so participated in programs to instal solar water-heaters in residential and institutional settings in London, Ontario, and Amherst, Nova Scotia. The federal government has funded 50% of program costs. Though some may be surprised to hear it, there is ample solar radiation in Canada to make this kind of technology worthwhile. Thousands of solar water-heaters have been installed in Holland, Denmark, Sweden and Germany; in fact, Germany provides incentives in the form of tax credits to individuals who use renewable sources of energy. Some people regret that in Canada solar energy is not given the beneficial tax treatment that the other forms of renewable energy enjoy, despite the changes made in this regard in the most recent budget tabled by Minister of Finance Paul Martin. Tax incentives seem to be the most appropriate way of promoting the expansion of low-polluting and renewable sources of energy.

In the mining sector, Inco in Sudbury implemented a program 25 years ago to reduce the amount of energy it used. This program has made it possible to reduce CO₂ production per pound of nickel and copper produced and has achieved corresponding reductions in SO₂ emissions. The replacement of diesel by methanol is also an approach that has been explored as a way of reducing the consumption of energy from conventional sources. On an experimental basis, Inco has converted a number of mine tunnels into underground greenhouses where the ambient heat ensures efficient production of pine seedlings. For industries that are heavy users of all types of energy, there is an obvious advantage in using new technologies and alternative energy sources.

A number of initiatives and projects have also been implemented by the government. Environment Canada, for example, has helped to establish national standards for packaging and composting because Canada has committed itself to half the amount of solid waste going into the country's garbage dumps by the year 2000. Following the introduction of a waste reduction program in 1994, the department's head office reduced waste by 75%. Worm composters have been added to the array of recovery and recycling methods. Many other government departments and offices operate similar waste reduction programs.

In another area, Environment Canada manages the *Atlantic Coastal Action Program*, which focuses on local community action. In round-table discussions to identify the problems and appropriate means of action, it emerged that the local communities wanted first of all to ensure that the traditional trades would continue, then to make the already established industries adopt sustainable practices, and, finally, to find new trades that would also do so. Thirteen separate initiatives are currently under way in Atlantic Canada, in which various interest groups, such as universities and the First Nations, are taking part.

The Department of National Defence is responsible for providing adequate management of the extensive land-holdings belonging to the federal government, and has created a large-scale pollution reduction program at the Canadian Forces Base at Goose Bay, Labrador; all employees share responsibility for the program, although a special environmental team deals with specific cases. Development of an environmental management plan meeting the ISO 14000 standard is aimed at minimizing any negative impact on the environment from military activities. This plan has three parts: (a) employee training; (b) use of environmental assessment; and (c) use of audit procedures. Environmental management also involves corrective action. A fuel spill in the 1960s meant that the Department of National Defence had to investigate recovery measures when it purchased the facilities in question. Without using cutting-edge technology and by relying on simple methods, the Department managed to recover 910,000 litres of fuel, about 2,000 litres a day. The recovered fuel could even be used in the boilers.

The Department of Natural Resources Canada (NRCan), for its part, is very active in the energy-saving sector at the industrial, commercial and residential levels. The C-2000 program, a small-scale pilot project for commercial buildings, ensures that, when a building is designed, all the parties involved work together to minimize energy consumption. Integrated design, multidisciplinary approaches and partnerships promote innovative procedures and technology as part of an overall approach. Ultimately, NRCan wants designers and promoters to have at their disposal criteria and tools that will enable them to achieve better energy efficiency.

As part of a national job-creation program for young university graduates, the Canadian Manufacturers Association, with the assistance of consultants from Energy Pathways, is promoting the development of new business sectors in Canada. For example, every year approximately 1,000 people are hired to work in the energy management field, and the number of jobs in “quality management” activities, which cover the management of environmental quality, have increased by 30% in two years. There is enormous potential in the expanding field of

performance contracts, whereby a third party lends the necessary capital to achieve results in terms of lower energy consumption and is paid out of the resulting savings.

WAYS OF ACHIEVING SUSTAINABLE DEVELOPMENT

At the forum on “Jobs, the Environment and Sustainable Development,” one participant pointed to the profound changes in store for the business world over the next 40 years. Specifically, forecasts show that this world will be more knowledge-based and will rely on leadership and virtual reality. Existing borders, which are so much a part of our institutions today, will begin to collapse. People will be alternately employed and unemployed. Owners of capital will move from one company to another. Businesses will grow more rapidly; they will decline, change and be transformed. It is therefore essential to ensure that some things, such as principles, ethics, values, justice, respect, generosity and sharing, remain unchanged. The concept of sustainable development demands that we consider the future; some participants said that in order to preserve a balance the government must commit itself to achieving objectives promoting social justice and equity in the way resources are distributed.

If people are to handle the coming changes, they must feel that they are part of a common movement. The belief was expressed that, to initiate such a movement, political leaders must provide general guidance to encourage new forms of communication, organization and institutions. Ideally, their guidance should point in the same direction as community action, so that political action and community action will provide mutual reinforcement. In addition, the federal government will have to assert its leadership role by setting appropriate high national standards developed jointly with the provinces. As the Minister of the Environment pointed out, the government has Canadians’ backing on this point; Canadians want the situation to improve, whether the issue is water, air or other aspects of the environment.

A. Information

It is essential that information be disseminated if everyone is to become aware of the benefits of adopting new approaches and of changing our behaviour and our lifestyle. On this point, MPs can play an important role, not only by explaining in detail facts about the environment and sustainable development, but also by informing the public about recent developments in our

understanding of the area, recent experiments and technology. In addition, the public should be informed about the results of their efforts towards sustainable development so that they will be encouraged to persevere.

MPs could also play a role in focusing attention on worthy projects such as the Action 21 program adopted at the Rio Summit, which provides some solutions to the environmental problems of our planet. To encourage people to initiate projects in their own community, we should also promote initiatives such as that undertaken by the *Corporation d'amélioration et de protection de l'environnement* (Baie-Comeau); the Corner Brook hazardous waste project; and the Mirabel project, in which a mobile unit picks up reusable or recyclable material in co-operation with municipal and regional governments.

B. Education

Education will also play a role in raising public awareness of the issues involved in sustainable development. The importance of systematic education provided both in the schools and informally by non-governmental organizations, government departments and the media, cannot be over-emphasized. Unfortunately, developing an educational program focusing specifically on sustainable development is increasingly difficult at a time when severe budget cuts are being imposed. Even so, one participant pointed out that the document entitled *Mission Earth*, a version of the Action 21 program taken up by young people throughout the world, should be made available in all schools. Young Canadians could take inspiration from this document to propose a sustainable development program for their own school.

In the health field, increasing emphasis is being put on prevention, through anti-drinking, anti-smoking and seatbelt programs. Some participants believed that similar programs should be developed specifically for the environment. They wanted the government to recognize the importance of a national communication program similar to ParticipAction which would promote sustainable development. Another participant suggested a large-scale public awareness campaign be launched, focusing on barriers to sustainable development, in order to make the public more aware of the environmental impact of, for example, energy consumption.

Raising public awareness should make it easier to bring about changes, and help politicians to win public support. The same is true in the business world, where new products can

be developed and marketed only if the consumer is interested in buying them and prepared to pay the price.

C. Getting Everyone Involved

It is vital for all to become involved. For example, in terms of employment, MPs and all Canadians must be convinced that there is an excellent opportunity to create jobs in the field of ecotechnology. Some people believe that the government must also get involved at the community level by helping communities to solve the problem of job losses, for example, through re-structuring and finding alternatives. Transition plans and ways of minimizing social and community costs should also be drawn up. It would also be extremely useful for the government to identify businesses that practise sustainable development.

The same is true with respect to the other problems associated with implementing sustainable development in a number of economic sectors, such as, for example, reducing the use of pesticides and replacing them with other products and methods. One participant pointed out that regulation is very important in the housing and transportation sectors and that the government must therefore not abandon this crucial role.

D. Participation in Decision-Making

Another important element in achieving sustainable development is public participation in the decision-making process. According to one participant in the forum, if we took the money invested in technology and put it, for example, into reducing and reusing and getting the public to participate at all levels, we would have no difficulty in achieving the objectives of sustainable development. Not only must individuals take on responsibility, so must manufacturers. This is one of the things the Canadian government is trying to do with its packaging reduction project.

E. Role of the Government

In more concrete terms, the federal government must get down to the task of catching up with countries such as Japan, Germany and France. Some forum participants pointed out that, after being one of the leaders in environmental issues from 1970 to 1995, Canada must now reassess the situation and ask itself whether it is really still the “green” country it claims to be,

the model of an environmentally friendly country. Government action was said to be required on six different fronts:

- Respecting the environment in its procurement program;
- Stepping up the move to voluntary environmental initiatives while ensuring appropriate and effective regulations;
- Improving the *Canadian Environmental Protection Act*;
- Supporting international environmental agreements, the motivating force behind the world-wide movement toward sustainable development; examples are CITES, concerning trade in endangered species, the Basel Convention on hazardous waste, the World Trade Organization and its environmental group; and the Commission for Environmental Co-operation of NAFTA;
- Encouraging technological progress; and
- Investing in renewable energy and energy efficiency.

F. Integrating Health, the Economy and the Environment

If we want to find solutions to our environmental problems, we have to take a comprehensive view of the situation and know what is going on globally. It is also important that we act on all fronts. According to some participants, the thing that gives the idea of sustainable development real force is the integration of three factors: the economy, the environment, and health. To illustrate the inter-relationship to these three factors, some participants referred to our consumption of energy and to how energy is produced. For instance, conventional sources of energy produce smog in urban centres, which is detrimental to health, causing pulmonary and cardiac disease. This situation generates costs in terms of health care, in addition to polluting the atmosphere. Other health problems are particularly associated with pesticide use, as one participant pointed out.

Many participants believed that the relationship between health, the economy and the environment implies integrating the environmental costs. Economists contend that the major difficulty with environmental policy is that all too often people do not consider the costs they may be imposing on others, or the costs that businesses may be imposing on other businesses by failing to include environmental costs in their overall pricing policy. Other participants, however, believed that we have to go beyond this. In their view, it is not enough even to pay the full price for energy; we have to get rid of subsidies to companies producing energy from fossil fuels. We also have to

redesign the tax system and tax practices that generate pollution. At this point, however, governments do not appear ready to commit themselves to this approach.

G. Sectoral Issues

A number of sectoral themes and issues were discussed throughout the forum. Some issues are extremely important from the point of view of achieving sustainable development. Specific examples and practical approaches with respect to several strategies were also presented at the Forum.

1. Energy

On the issue of energy, all participants agreed that we in Canada have to reduce our energy consumption. This is not an easy task, if we consider, for example, hydro-electric energy in Quebec, where it is difficult to reduce consumption because prices are too low to encourage efficient energy use. One way of remedying this inconsistency would be to lower or eliminate the hook-up fees charged by Hydro-Québec and increase the consumption premium. Generally speaking, participants agreed that economic motivation or financial incentives were needed to encourage people to invest in lower energy consumption. In commercial and industrial contexts, we should consider invoice financing, a practice whereby the public utility company or firm specializing in energy savings provides the financing needed for purchasing and installing new equipment, which is then repaid out of the energy savings realized. Lastly, in terms of businesses, it is important to measure the amount of energy consumed at each stage of production and to continue looking for new ways to reduce consumption at each of these stages. Obviously, company managers must support the objective and be seen to be actively participating in the search for alternatives.

2. Water

A similar situation is evident with respect to water consumption. If people are to be persuaded to reduce their water consumption, they must first be aware of their consumption levels. The installation of water meters and the adoption of appropriate pay-per-use rates are desirable, as some very positive experiments have shown. However, some specialists believe that rates must be

set carefully to avoid any inequities among the various types of consumers (for example families) and so that users/payers will become accustomed to new ways of doing things.

3. Waste

Like our consumption of energy and water, our production of waste must be reduced. According to economists, the reason so much waste is produced is that the environment can be used free of charge. Certainly the public pays for garbage pick-up and solid waste management, but the price is totally independent of the quantity of waste they produce. To encourage waste reduction, one economist proposed charging a certain rate per bag of garbage, a strategy already in place in certain Canadian municipalities. Households could purchase labels to stick on each of their own garbage bags. However, before considering a pay-per-use system, we must be sure that there is an effective recovery and recycling program.

At the community level, some progress has been made in several regions in the recovery of paper, metal, boxes and plastics at the curb or in containers placed in strategic locations, as is done in a number of municipalities across Canada. Businesses, government departments and governments are also working on this. However, a number of participants pointed out that we must also reduce and re-use, and not just recover and recycle. For example, we have to reduce packaging and cut back on our use of pesticides and other hazardous products; we must start repairing furniture and electric household appliances or recovering some parts and recycling others, as well as re-using construction materials, windows and so on. In addition to committing ourselves to reducing and re-using, we also have to ensure that resources are made available to municipalities to manage hazardous household waste, organic matter and other products.

4. Construction

The construction industry primarily needs innovative procedures and technology, and of course partnerships between the public and private sectors. Individual projects that take a comprehensive approach and use integrated design have produced good results and should be followed up. We also have to improve the building code; for example, companies and manufacturers should be required to measure the gas, electricity and water consumed in each sub-unit. In addition, we have to expand the application of the *Energy Efficiency Act*. Lastly, significant savings could be achieved by ensuring that existing buildings comply with current standards. One participant pointed out that, in the commercial sector, 13% of buildings could be retrofitted by the

year 2000 and 22% by 2010. Bringing these buildings up to standard would generate savings of \$11 billion. As well, one participant pointed out that enormous savings could be made in the schools by bringing them up to code standards, and that even greater savings could be made by having the teachers and students participate in the process.

5. Transportation

A lot of work is still to be done in the transportation industry, particularly with respect to motor vehicle standards. The improvements made to date are considered to be marginal; it is urgent that cars be made considerably more efficient, particularly in their gasoline consumption. It is also essential that people change the ways in which they travel to and from work. We have to find ways of discouraging the use of private cars and encouraging the use of public transit. The main loophole here is still the cost of parking, which is too low in relation to the cost of public transit. For example, one participant stated that the ratio is on the order of 20:80 (in dollars) in the case of the Transport Canada building. This question was also raised in the context of the “Green Hill” project, where the contentious problem of free parking on Parliament Hill has still not been resolved.

At the individual level, we also have to consider how to induce the people around us to use more ecologically sound means of transportation to get to work. Lastly, and more generally, some people believe that we should redesign our urban centres, increasing the population density and bringing people closer to the sources of goods and services. We also have to fund research and development, infrastructure and technology in the field of transportation. In fact, economic development as a whole should focus on diversified and sustainable means of transportation.

CONCLUSION

The Parliamentary Forum on the theme “Jobs, the Environment and Sustainable Development” provided an opportunity for participants to exchange knowledge and share experiences that may be useful in gaining a better understanding of Canadian environmental challenges and how to achieve sustainable development. Participants were able to become more familiar with what people are doing as individuals, within their communities, and in their businesses. A number of ideas and practical achievements were described that could be copied or adapted to other contexts.

As the Minister of the Environment pointed out, Canada is not a shining example of an environmentally friendly country; however, while making this clear, we have to balance what we say with optimism, particularly for young people. We must no longer give the impression that we lack the political will, without which the environment and sustainable development will be in danger both in Canada and world-wide.

Although we all have some responsibility at the individual and social levels, government intervention is also seen as essential. Governments may be in a position to provide general guidance, make information available to the public, encourage the search for alternatives, promote social involvement, introduce a national awareness campaign for sustainable development along the lines of ParticipAction and, of course, give us the tools our society can use to bring about the profound changes that are necessary.

At the federal level, government leadership could be expressed by setting high national standards that are appropriate and have been negotiated jointly with the provinces. It would then be easier to identify the best ways of managing the environment and deciding who should do what. Some people think that we spend too much time talking about this instead of answering the fundamental question: "What do we have to do for the environment?" Co-operation and co-ordination are undoubtedly key factors in implementing and achieving sustainable development, the fundamental objective set by the international community at the 1992 Earth Summit in Rio.