

ECONOMIC AND SOCIAL COUNCIL
Substantive session of 2005

IMPLEMENTATION OF THE INTERNATIONAL COVENANT
ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS

Fourth periodic reports submitted by States parties under
articles 16 and 17 of the Covenant

Addendum
CANADA* ** ***

[4 October 2004]

* The third periodic report concerning rights covered by articles 1 to 15 (E/1994/104/Add.17) was considered by the Committee on Economic, Social and Cultural Rights at its nineteenth session (see E/C.12/1998/SR.46-48; E/C.12/1/Add.31) in 1998.

** The information submitted by Canada in accordance with the guidelines concerning the initial part of reports of States parties is contained in the core document (HRI/CORE/1/Add.91).

*** In accordance with the information transmitted to States parties regarding the processing of their reports, the present document was not formally edited before being sent to the United Nations translation services.

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Right to benefit from scientific progress and its applications

Institutional infrastructure

549. In 1996, the National Advisory Board on Science and Technology was replaced by the Advisory Council on Science and Technology (ACST) to advise the Prime Minister and Cabinet on critical science, technology and innovation issues. Since this time they have produced the following reports:

- “Public Investments in University Research: Reaping the Benefits; Report of the Expert Panel on the Commercialization of University Research,” ACST, May 1999
- “Stepping Up; Skills and Opportunities in the Knowledge Economy,” ACST, October 1999
- “Reaching Out; Canada, International Science and Technology, and the Knowledge-based Economy,” ACST, June 2000
- “Creating a Sustainable University Research Environment in Canada; The Role of the Indirect Costs of Federally Sponsored Research,” ACST, September 2000.

550. In 1996, the government issued a federal strategy for science and technology, *Science and Technology for the New Century*, that set out the goals for the federal investment and principles to assist departments in working toward those goals. A key theme of the Strategy was the federal role in building the Canadian innovation system. *Science and Technology for the New Century* called for a greater reliance on external advice which resulted in the creation of the Council of Science and Technology Advisors (CSTA) in 1998. The CSTA provides the Canadian Cabinet, with external expert advice on internal federal government science and technology issues requiring strategic attention. The CSTA is chaired by the Secretary of State for Science, Research and Development.

551. In April 1998, the CSTA held its inaugural meeting and established two sub-committees to undertake the tasks requested by the Canadian Cabinet. The CSTA released its report *Science Advice for Government Effectiveness* (SAGE), in May 1999. The report recommended a set of principles and guidelines for the effective use of science advice in decision-making.

552. The CSTA has produced a number of additional reports that fall outside this reporting period. Reports of the CSTA, as well as supporting documents, can be found on the CSTA Web site (<http://csta-cest.gc.ca>). The CSTA’s reports and their findings are having a positive impact, with a number of science-based departments and agencies independently moving forward on report recommendations.

Highlights of federal initiatives

553. The Networks of Centres of Excellence (NCE) Program is an innovative approach to building partnerships between universities, industry and government to work together on problems of strategic importance to Canada. The program provides funds to support networking collaborations between university, industry and government researchers. The program was initiated in January 1988 and made permanent in 1997 with an annual program budget of \$47.4 million which was increased by \$30 million starting in 1999. There are 22 nation-wide, multi-disciplinary networks in areas ranging from biotechnology to telecommunications. Four new networks were chosen in 1998, three in 1999 and four in 2000, by peer-review selection committees. The Networks of Centres of Excellence Program has produced significant discoveries, and has fostered dynamic and

productive university-industry collaboration, helping to accelerate technology development and application.

554. The Canada Foundation for Innovation (CFI), which was created in 1997, is an arm's length organization, established by legislation, that reports to Parliament through the Minister of Industry. Its main goal is to provide financial assistance for the modernization of research infrastructure in Canadian universities and colleges, research hospitals and not for profit research institutes in the fields of health, environment, science and engineering. By investing in research infrastructure projects, the CFI supports research excellence, and helps strengthen research training at institutions across Canada. The CFI supplies on average 40 percent of a project's costs - the remaining 60 percent is supplied by partners in the public, private and voluntary sectors (particularly provincial governments).

555. The Canada's SchoolNet program, a joint federal, provincial and territorial initiative, helped connect 500,000 computers in schools and libraries across Canada. This initiative provides Canadians educators, librarians and students with valuable electronic learning tools and services, and encourages the development of information-technology skills.

556. A national network of 8,800 community access sites was established to create new and exciting opportunities for growth and jobs and to help provide rural and urban communities affordable access to the Internet, as well as the skills to use it effectively. These public Internet access sites serve as information highway "on ramps."

557. In addition, the Computers for Schools Program (CFS) was established to enable schools and libraries to have better access to computers and supporting software to allow them to take full advantage of the new information technologies. In collaboration with educational institutions, communities, businesses and provincial and territorial governments, CFS has delivered more than 250,000 refurbished computers to schools and libraries, free of cost.

558. Industry Canada supports people with disabilities through providing information and support to the assistive technologies industry and to the rehabilitation engineering research sectors. The department is a leader in the development of accessible Web standards and multiple format production standards to provide accessible information for all Canadians. Departmental staff also work on the development of other standards to provide an accessible living and working environment for Canadian citizens.

Expenditures for scientific activities

559. Canada's total expenditures on research and development amounted to \$13.367 billion in 1994 and \$15.703 billion in 1999; in proportion to the gross domestic product, they decreased from 1.77 percent in 1994 to 1.66 percent in 1999.

560. In 1999, the federal government spent \$6.16 billion on science and technology activities without including federal research and development tax credits. About 58 percent of science expenditures are spent on activities done by the federal government itself. In addition, the federal government funds scientific activities in business enterprise, higher education, provincial governments, private non-profit organizations, and other Canadian and foreign organizations.

561. Extramurally, the largest recipients of federal government funds in 1999 are the higher-education sectors (19 percent) and the business sector (16 percent).

562. The government has made the commitment to make Canada one of the top five countries for research and development performance by 2010. This is a challenge for all Canadians, but in particular for the private sector as the largest research investor in Canada. As its contribution, the federal Government will at least double the current federal investment in research and development by 2010.

Technology transfer

563. The Expert Panel on the Commercialization of University Research was created in October 1998 by the Advisory Council on Science and Technology (ACST). The Panel's mandate was to provide independent, expert advice on options to maximize the social and economic benefits to Canada from the public investment in university research. The Panel completed its work in May 1999. Its report *Public Investments in University Research: Reaping the Benefits* is available on the ACST Web site (<http://acst-ccst.gc.ca>). The report calls for coherent university intellectual property policies, adequately resourced university commercialization offices, skills development measures, a competitive business environment and increased investments in university research.

Measures taken to promote the dissemination of information about technical progress

564. The mandate of the Research Branch of Agriculture and Agri-Food Canada (AAFC) is to promote the development, adaptation and competitiveness of the agriculture and agri-food sector through policies and programs that are most appropriately provided by the federal government. The overall goal is to help the sector maximize its contribution to Canada's economic and environmental objectives and achieve a safe, high quality food supply while maintaining a strong foundation for the agriculture and agri-food sector and rural communities. Research Branch's internet home page was redesigned to organize information into areas targeted at key audiences: scientists, industry, managers, reporters, and youth. The annual 200 page Directory of Research for 1998 was produced and made fully searchable on the Internet.

565. "CanExplore," a one-stop tool to search federal information resources in science and technology for sustainability, was launched. Developed through a cooperative agreement with Environment Canada, Fisheries and Oceans Canada and Natural Resources Canada, it indexes more than 200,000 Internet documents (<http://canexplore.gc.ca/>).

566. “Agvance” and “Connect with Research” were posted on the Internet. A search engine can explore Agvance for stories on sustainability. “Connect with Research” describes work done to achieve sustainable agriculture in 10 commodity areas, with contact names.

567. The Research Branch produced and promoted “Earth Tones” videos for the Discovery Channel and the Internet. The series packages sustainability stories into themes related to climate change, health, toxins in air and water, biodiversity, and citizen engagement. Internet material forms the basis for “Cable in the classroom,” a teaching tool using the videos and lesson plans to reach 12-16 year old children in school.

568. The Research Branch has also initiated actions to collaborate with provinces, universities, and industry to undertake the development, and encourage the transfer of innovative, affordable agriculture technologies.

569. The on-line Canadian Rural Information Service’s (CRIS) Environmental Directory provides links to a wide range of agricultural and rural environmental sites. CRIS responds to inquiries through the Internet, telephone, fax, mail and e-mail.

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British Columbia

Science and technology

809. British Columbia recognizes the importance of science and technology and has maintained ongoing efforts to raise the profile of the science enterprise in the province. The result is continuing scientific progress highlighted by accelerating growth of its high-tech community, a continuing supply of highly qualified technical people to industry sectors, and a public awareness of the value of science and technology in everyday life.

810. During the reporting period, British Columbia provided operations and programs grant funding from a budget of approximately \$25 million to support agencies, institutions and community organizations gain access to and benefits from the science enterprise.

811. British Columbia has long been a leader in Canada in developing the science culture. The Province continued implementing its Partners in Science Awareness Program, which coordinates various initiatives at the individual, corporate and community levels that help develop public appreciation and understanding of science and technology through such activities as Regional Science Fairs, Scientists and Technologists in the Schools, and including direct support of technical conferences that incorporate public venues for the lay community. With changing annual themes (e.g. Inventors: The Spirit of Innovation; Technology at Work: Explore Careers; Discover the Scientist in You), promoted by distribution of 90,000 booklets in comic-book format to primary and secondary schools and event venues, British Columbia culminates its annual science culture programming

by celebrating the Festival of Science and Technology, a 10-day program of events province-wide involving industry, community centres, shopping malls and in-class project activities for primary and secondary school students.

812. British Columbia pursued international contacts and cooperation during the latter part of the reporting period through the Science Council of British Columbia's international advisory board and memoranda of understanding with countries of the western Pacific for collaboration in science activities. The Ocean Research Network for the Pacific, focusing on the sustainability of the Pacific Ocean environment, received formal recognition within the Asia Pacific Economic Cooperation framework at the 1997 Canada APEC Summit meeting.

813. Science World British Columbia, the HR Macmillan Space Centre, and the Vancouver Aquarium developed the Engaging Science program to enhance the elementary school science curriculum. From the time it was developed in 1996 until 2003 more than 50 percent of the province's kindergarten to grade seven teachers have benefited from the program. Teachers are provided with access to experts at the three institutions in the areas of earth science, environmental science, life science and space science. They are provided with classroom activities and teaching resources.

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Saskatchewan

1170. In March 1999, the Saskatchewan Department of Economic and Co-operative Development (SDECD) gave \$1.2 million to the Eastend Community Tourism Authority to construct a tourism and research facility called the Eastend Tyrannosaurus Rex Interpretive Centre.

1171. SDECD's Strategic Investment Fund (\$5.9 million annual) encourages the development of new technologies and research infrastructure.

1172. SDECD is providing \$25 million over five years towards the Canadian Light Source, a synchrotron light facility at the University of Saskatchewan. The \$140.9 million facility will serve industrial and academic users from across Canada and will focus on research investigation in four key areas: biotechnology, biopharmaceuticals and medicine, mining, natural resources and the environment, advanced materials and manufacturing, and telecommunications and information technology.

1173. Close to \$20 million of Canada-Saskatchewan Western Economic Partnership Agreement funding has been committed to existing and new research centers including the Petroleum Technology Research Centre, the Saskatchewan Structural Sciences Centre (which will provide complementary research to the Canadian Light Source Synchrotron), the International Test Centre for Carbon Dioxide Capture, the Estey Centre for Law and Economics in International Trade, and the expansion to the National Research Council's Plant Biotechnology Institute.

1174. The Innovation and Science Fund is a \$10 million fund to provide funding to Saskatchewan universities, colleges, and research institutes in support of projects receiving approval and funding from the Canada Foundation for Innovation, the Canada Research Chairs, the Canadian Health Services Research Foundation, and the provincial portion of the Medical Research Council Regional Partnership Program or its successor under the newly established Canadian Institutes for Health Research. (These are all federal government research grants). The Innovation and Science Fund will be administered by SDECD and project funding will commence in fiscal 2000-2001.

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Quebec

Research, science and technology

1762. Government activities in respect of research, science and technology, which had previously been under the jurisdiction of two separate departments, were combined in June 1999 under the responsibility of one, the ministère de la Recherche, de la Science et de la Technologie. Its mission is to establish strategic orientations in relation to scientific and technological development in Québec. Its role is to encourage and support initiatives and stimulate interaction among universities and colleges, industry and government, and organizations and associations, to promote convergence in respect of research initiatives that affect all aspects of social, cultural and economic life. It is also mandated to provide leadership and representation in these respects, both in Québec and abroad. In January 1999, the ministère formed a task force with the mandate of developing a science policy.

1763. Progress in medicine, as a scientific discipline and social practice, raise fundamental questions from the standpoint of human dignity, individual equality and the right to participate in the benefits of scientific progress. The Commission des droits de la personne et des droits de la jeunesse (la Commission) is persuaded that modern medicine is a kind of crossroads where concerns that run counter to an exclusively technical, market-oriented or bureaucratic logic converge, and in 1995 it co-organized a conference focussing on human rights and the issues in modern medicine. The proceedings of that conference, in which the Société québécoise de droit international and the Département des sciences juridiques of the Université du Québec _ Montréal participated, have been published.

1764. The Commission also took part in the process surrounding the enactment by the National Assembly of amendments to the *Civil Code of Québec* in relation to medical research (S.Q. 1998, c. 32). In its brief, the Commission examined the proposed amendments having regard to the fundamental rights of research subjects. It concluded that some of the amendments appeared to be justified. However, the Commission was concerned about the rights of minors and adults under a disability who are involved in experiments, and recommended that the composition and functioning of the ethics committees that approve the experiments be more closely regulated. That recommendation was accepted by the legislature.

1765. The Commission's internet site provides access to information about the Québec Charter and the Commission's services, activities, achievements and publications. The Commission has also created an electronic distribution list to enable a discussion group on human rights education to converse about various topics. In 1999, about 300 messages were circulated using the distribution list, which has 200 subscribers, mainly in Québec, but also in France, Belgium, Burkina Faso, Switzerland, the United Kingdom, Argentina and the United States.

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New Brunswick

Article 15: Right to participate in cultural life and benefit from scientific progress and the protection of authors' rights

1935. In September 1994, the Information Highway Secretariat was established within the Department of Economic Development and Tourism in order to stimulate maximum economic benefits in the Province. The Secretariat became a one-stop point of entry for all activities related to information technology.

1936. A standard rate for Internet connections was established.

1937. A government-wide communications and technology architecture was set up. The Government became a model user of information technologies.

1938. The Government worked with community groups, educators, libraries and cultural institutions to set up NetLearn - a lifelong learning project for the provision of New Brunswick content on the Internet in both official languages.

1939. In 1995-1996, the Information Highway Secretariat was mandated to create in New Brunswick a truly information technology-friendly society. A technology infrastructure was put in place and human resources were trained. New information technology companies were started in the Province, which in turn created more jobs. This has progressed further each year.

1940. New Brunswick was the first Province to have all its schools interlinked, as well as being connected to the Internet.

1941. New Brunswick was the pilot province for the federal Community Access Program where communities were provided access sites to the Internet.

1942. The Province was the official launching site in 1995 for National Science and Technology Week with opening ceremonies held at the Miramichi Community College.

1943. In 1996, the Province created a free ItJobNet Web site which involved three searchable data bases: Job openings in New Brunswick companies, posting of individual resumes and the listing of IT companies in New Brunswick.

1944. A Premier's Forum on New Brunswick's Information Technology Workforce was held resulting in actions plans that were undertaken. The Advanced Training Technology/Multimedia sector doubled in size over the year.

1945. Connect NB was established to create over 200 sustainable electronic Community Access Centres in rural New Brunswick. These Centres have since been established.

1946. A "Get Connected" Program was put in place that provided a refund of provincial sales tax for people purchasing personal computers for home use. This program was repeated in 1997 and also included a refund equal to the HST. This offer included the purchase of upgrade packages including modems.

1947. Programs on using the computer, software and the Internet were supplied to the public by the community access centres.

1948. A single entry point for clinical trials to be coordinated in New Brunswick was established. This greatly increased the efficiency and quality of the trials. More doctors, patients and hospitals became involved. More jobs were created and revenues into the Province increased.

1949. In 1998 and 1999, the delivery of earlier programs progressed further. Curriculum development for Internet application increased as did the number of various training initiatives and workforce development. A New Brunswick Information Technology Industry Directory has been developed and revised as needed.