

ECONOMIC AND SOCIAL COUNCIL
Substantive session of 1997

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

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

Addendum
CANADA*

[October 1997]

* The second periodic reports concerning rights covered by articles 6 to 9 (E/1984/7/Add.28) and by articles 10 to 15 (E/1990/6/Add.3) submitted by the Government of Canada were considered by the Committee on Economic, Social and Cultural Rights at its third (see E/C.12/1989/SR.8 and 11) and eighth (see E/C.12/1993/SR.6, 7 and 18) sessions respectively.

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Article 15. Right to take part in cultural life, and to enjoy the benefits of scientific progress and the protection of authors' interests

78. Article 15 (1) (b) recognizes the right of everyone to enjoy the benefits of scientific progress and its applications. One mode of achieving this objective in Canada is through competition policy. In *R. v. Nova Scotia Pharmaceutical Society*, the Supreme Court of Canada upheld convictions of conspiracy to unduly lessen competition in the sale of pharmaceutical drugs contrary to section 32 (1) (c) of the Competition Act. The Court held that section 32 (1) (c) does not contravene section 7 (liberty of the person) of the Canadian Charter of Rights and Freedoms on the ground of vagueness. The Court noted that this section embodies one of the oldest and most important parts of Canadian public policy in the economic field.

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Right to enjoy the benefits of scientific progress and its application

(i) Institutional infrastructure

394. During this reporting period, the Government of Canada launched a comprehensive science and technology review to examine the challenges facing science and technology in Canada, and the opportunities for federal action. As a result of extensive public consultations and valuable input from other sources, the federal Government adopted a new science and technology strategy designed to produce a plan of action for securing Canada's future economic and social well-being. The implementation of the many changes and developments planned in this strategy are currently under way. Its main theme is partnerships with the private sector, academic institutions and other governments to build a stronger Canadian system of innovation to maintain or improve the quality of life, and to contribute to the advancement of science. It will provide a governance mechanism to realize a coherent set of policies, programmes and institutions that will maximize the value to Canada of its direct investment in science and technology. The strategy

will require federal departments and agencies to report annually to Parliament on their science and technology expenditures, activities and priorities.

395. The need to deal effectively with the rapid changes of science and innovation, and to better manage science and technology expenditures and performance, led the federal Government to restructure some of its institutions in science. During this reporting period, the Department of Industry replaced the Department of Industry, Science and Technology. The new Department was given a broader mandate to help make Canada more competitive by fostering the growth of Canadian business; promoting a fair, efficient marketplace; and encouraging scientific research and technology diffusion. It is the main department responsible for policy development and implementation, namely, in industry and technology, trade and commerce, science, consumer affairs, corporations and corporate securities, competition and restraint of trade, bankruptcy, patents, copyrights, trademark, communications, investment, small business and tourism. The Communications Research Centre, as a principal federal research centre in telecommunications, has become an instrument for creating competitiveness through new innovative research and development programmes, and through greater focus on the diffusion of new technologies and knowledge.

396. Since its creation in 1987, the National Advisory Board on Science and Technology has made many recommendations and provided new approaches and critical information regarding the structure of the Canadian science and technology establishment, its performance, constraints to improvements in that performance, and patterns in the allocation of national financial and human resources.

397. In 1996, the National Advisory Board on Science and Technology was replaced by the Advisory Council on Science and Technology to advise the Prime Minister and Cabinet on critical science, technology and innovation issues.

398. Although the Science Council of Canada ceased to exist in 1992, many other science research-oriented agencies, described in Canada's first report, remain in the new Industry Portfolio: the National Research Council; the Natural Sciences and Engineering Research Council (NSERC); the Social Sciences and Humanities Research Council.

399. In the Industry Portfolio, responsibility for regional programmes belongs to three regional agencies. The Federal Office of Regional Development (Quebec), known as FORD(Q), supports the development of the economic potential of the regions of Quebec and the creation of sustainable employment by fostering a business climate that enables small and medium-sized enterprises to grow and prosper. The Atlantic Canada Opportunities Agencies (ACOA) promotes economic development, coordinates the broader spectrum of federal government activities and provides a single point of contact to federal government programming for the small business sector in the four Atlantic provinces. The mandate of Western Economic Diversification Canada (WD) is to develop and diversify the western Canadian economy, coordinate federal economic development activities in the west and represent the western perspective in national decision-making. It addresses the needs of small and medium-sized enterprises by contributing to the creation of a positive business climate, improving access to capital and providing services across western Canada.

400. Other major players are also included in the new Industry portfolio. The Business Development Bank of Canada promotes the creation and development of small and medium-sized enterprises in Canada. Its new mandate will give the Bank the tools to move in new directions and to tailor its products to meet the needs of small and medium-sized

enterprises. The Bank provides specialized financing for commercially viable businesses, including term loans, venture loans and venture capital; and extensive business-management counselling, training and mentoring services. It also provides loans assistance, counselling and monitoring programmes for women entrepreneurs.

401. In June 1994, the Government gave the Canadian Space Agency a new mandate to coordinate all federal civil space activities, and announced a new Canadian space programme to advance the development and application of space science and technology to meet Canadian needs, and to stimulate the development of an internationally competitive space industry.

402. The Standards Council of Canada is a Crown corporation that promotes voluntary standardization as a means of advancing the national economy; protecting the health, safety and welfare of the public; protecting consumers; and facing domestic and international trade and cooperation. The Standards Council will be streamlined and given a mandate to play an expanded role in supporting national, economic and social objectives.

403. Statistics Canada is the core of Canada's socio-economic information system. It will begin designing a new information system for science and technology, and will enable Canada to compare its performance with other economies. Canadians will be able to learn about the effectiveness of the Government's initiatives to promote innovative activity, the diffusion of technology and the adoption of new ideas by all sectors of the Canadian economy.

404. As stated in Canada's first report, many other participants carry out research activities. Natural Resources Canada, which has replaced the Department of Energy, Mines and Resources, added forestry to its area of research. Agriculture and AgriFood Canada (AAFC), Environment Canada, the Department of Fisheries and Oceans and Health Canada carry out research in their respective fields as does the Canada Mortgage and Housing Corporation. Atomic Energy of Canada continues to do basic and applied research in atomic energy for peaceful purposes. The Department of National Defence is also very involved in scientific research. The International Development Research Centre contributes to research on a variety of issues.

405. Agriculture and Agri-Food Canada's Research Branch introduces new technologies to improve production and preservation of agricultural and food products. The research centres work closely with private industry. They have always been very active in technology-transfer activities. Scientific progress made in the agriculture and agrifood industry has helped improve both the production and the quality of processed food and agricultural products, thereby benefiting Canadian consumers and helping the industry take advantage of new market opportunities abroad.

406. Since 1995, the department has set up a specialized, integrated national research network. AAFC currently has 18 research centres strategically located across Canada to serve a dynamic and highly diversified agricultural and agrifood sector. Agriculture and Agrifood Canada encourages innovation in private industry through its research and development (R & D) coinvestment programme called the Matching Investment Initiative. This project was created in 1995 and promotes the establishment of R & D partnerships with private industry. The department allocated \$21.6 million for this project in 1996/97.

(ii) Highlights of federal initiatives

407. With major contributions in areas such as telecommunications, robotics, medicine and environmental science, Canada remains an

important player in scientific and technological innovation. To maintain its ability to compete in a rapidly changing, knowledge-based, global economy, Canada is working towards creating a science and innovation culture that: fosters scientific research and seeks to apply the most recent technologies; ensures that young Canadians keep up with the ever increasing pace of technological change; recognizes and encourages achievements in science, technology, engineering and mathematics.

408. The Networks of Centres of Excellence Program is an innovative approach to building partnerships between universities, industry and government to work together on problems of strategic importance to Canada. In Phase Two, the \$197-million initiative funds 14 nationwide, multidisciplinary networks in areas ranging from biotechnology to telecommunications. Ten of the original Phase One networks were renewed on the recommendation of an arm's length peer review selection committee. Four new networks were chosen in 1995 by a peer review selection committee. 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. Since 1991, the networks have established 27 startup firms.

409. The Canada Scholarships Program established in 1988 to recognize and encourage outstanding students to pursue undergraduate degrees in the natural sciences, engineering and related disciplines was terminated in 1995; no new scholarship will be awarded, although existing scholarships are being honoured.

410. The federal Government continues to provide funding for science and technology awareness and promotion under the Science Culture Canada Program, and for major research projects with the Canadian Institute for Advanced Research. Funding for the type of research undertaken by the Royal Society of Canada is now being channelled through other institutions.

411. A National Science and Technology Week was designated to celebrate achievements in science, technology, engineering and mathematics. Every October, during 10 days, thousands of events are held across the country to give Canadians an opportunity to participate in related activities. Through the collaborative efforts of its various partners (such as federal, provincial and territorial governments; small, medium and large businesses; scientific, technological, engineering and mathematics associations, etc.), the week increases awareness of the far-reaching impact of science, technology, engineering and mathematics in Canadians' daily lives and on Canada's economic prosperity; it encourages youth to consider career opportunities in these fields; and it forges links between - and increases the visibility of - science and technology partners and stakeholders.

412. The NSERC (Natural Sciences and Engineering Council of Canada) is investing in five new Chairs for Women in Science and Engineering at Canadian universities. The Chairs will focus on increasing the application of women in science and engineering.

413. The rapid emergence of the Information Highway represents a unique and important opportunity for rural communities to experience much needed economic and social development. Access to the Information Highway provides these communities with the ability to easily communicate with each other, conduct business, or simply exchange information and ideas. The federal Government, in cooperation with all other levels of government, community interest groups and the private sector, is working to ensure that the business and social benefits of the Information Highway will be available to all Canadians.

414. Canada's SchoolNet is a joint federal, provincial and territorial initiative linking schools and libraries across Canada to the Internet. This initiative provides Canadian educators, librarians and students with valuable electronic learning tools and services, and encourages the development of information-technology skills. By the end of 1998, SchoolNet will link all of Canada's schools, libraries, colleges and universities to the Internet.

415. To help provide rural communities affordable access to the Internet, as well as the skills to use it effectively, a national network of community access sites was established to create new and exciting opportunities for growth and jobs. Through a competitive process, managed by the Community Access Program, communities are being selected to establish and operate public access sites in low-cost public locations, such as schools and libraries, to serve as Information Highway "on ramps". The aim of the project is to encourage all 5,000 rural communities to get linked to the Information Highway and to establish at least 1,500 public access points across Canada by the end of 1998.

416. In addition, the Computers for Schools and Libraries Program 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. This programme brings educational institutions, communities, businesses and provincial and territorial governments together in channelling surplus computer equipment to Canadian elementary and secondary schools, and to libraries, free of cost.

417. Canada recognizes that strong skills in science, technology, engineering and mathematics are essential for both economic success and social well-being. In 1993, it launched a programme designed to honour some of Canada's most outstanding elementary and secondary school teachers: the Prime Minister's Awards for Teaching Excellence in Science, Technology and Mathematics. The programme honours up to 375 teachers and other educators who have had a major, proven impact on student performance and interest in science, technology and mathematics. Awards totalling \$585,000 are being offered each year at the national, provincial, territorial and local levels. A total of 87 awards were granted in 1994.

(iii) Expenditures for scientific activities

418. Canada's global expenditures on research and development (GERD) amounted to \$9,755,000,000 in 1990 and \$12,015,000,000 in 1994; in proportion to the GDP, they increased from 1.46 per cent in 1990 to 1.61 per cent in 1994.

419. In 1994, the federal Government spent \$5,748,000,000 on science and technology activities, without including federal research and development tax credits. About 58 per cent of science expenditures are spent on activities done by the federal Government itself. In addition, the federal Government funds scientific activities in business enterprises, higher education, provincial governments, private non-profit organizations and other Canadian and foreign organizations. Extramurally, the largest recipients of federal government funds in 1994 are the higher-education sectors (17 per cent) and the business sector (16 per cent). The federal Government is the largest single funder and performer of research and development in Canada, and its research and development expenditure decisions can act as signals to the research and development community as a whole.

420. The federal Government provides income tax incentives to encourage businesses to carry out scientific research and experimental development

in Canada. These income tax incentives are an integral component of the federal Government's efforts to stimulate industrial research and development. Businesses carrying on eligible research and development in Canada are allowed to deduct all their qualifying current and capital expenditures on research and development in the year that the expenditures are incurred, or carry them forward to any subsequent taxation year. In addition, most expenditures on scientific research and experimental development earn investment tax credits of 20 per cent or 35 per cent, which they can carry back to 3 years or carry forward 10 years. The higher rate is only available for smaller Canadian-controlled private corporations and, usually, this 35 per cent is fully refundable. The Conference Board of Canada recognized the Canadian tax credit system in a 1994 report as the most generous system among those of the industrialized nations.

421. In addition to the federal tax incentives noted above, many provincial governments provide their own tax-based incentives to encourage the performance of scientific research and experimental development. All provinces match the federal system of incentives in terms of the immediate deductibility of most current and capital expenditures on scientific research and experimental development. The provinces of Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario and Quebec provide their own income tax incentives or additional tax deductions, which supplement the federal tax incentives.

422. While industrial research and development have risen significantly over the past two decades, Canadian industry does not invest nearly as much as does the private sector in some other industrial countries. As mentioned in the previous report, this can be explained, in part, by the resource-based industrial structure of the Canadian economy, which needs to spend relatively little on research and development, and possibly by the level of foreign ownership in its manufacturing sector.

(iv) Technology transfer

423. The federal Government continues to administer many programmes and activities which directly or indirectly transfer technology from Government or universities to industry. The National Research Council's Program for Industry/Laboratory Projects has been superseded and incorporated into the Industrial Research Assistance Program. It is a cooperative programme with industry that collaborates with Government, universities and other private sector institutions which offer assistance in the identification, development and licensing of technologies to which government research staff can make a significant contribution.

424. Furthermore, Industry Canada is working with universities, with the assistance of the Canadian Institute for Advanced Research, to facilitate the transfer and commercialization of university research results. A part of this effort involves Trans-Forum, launched as a pilot in 1994. It is an Internet-based communication and information service, which links the industry liaison office at universities, colleges, centres of excellence, research hospitals and technical institutes across Canada. Under the direction of an advisory board composed of industry liaison officials, its purpose is to enhance technology transfer and diffusion from higher-education institutions to Canadian business, especially small and medium-sized enterprises, by making key information related to technology transfer and commercialization instantly accessible to industry liaison officials to improve their marketing efforts.

425. In addition, the Natural Sciences and Engineering Research Council's Technology Partnerships Program is a new approach to getting university research into the market place quickly. The financial

resources provided by the Program will enable the university to carry out applied research and development to show the feasibility of a technology. The funding will give small and medium-size companies the capability to exploit the technology commercially and to create jobs for Canadians.

(v) Measures taken to promote the diffusion of information on scientific progress

426. As explained in Canada's first report, the freedom of information eases the diffusion of information on scientific progress that exists in Canada. Canadians can access information in this field from publications released by scientists and research institutions. They can also benefit from the information distributed by the communications media. The Government continues to encourage diffusion of information on scientific progress, and maintains its programmes and activities which were detailed in the first report and are only briefly recalled here.

427. The National Research Council maintains its Technical Information Service designed to address the needs of small and medium-size businesses that have limited research resources. As part of the Industrial Research Assistance Program, it deals with 11,000 firms a year, which involves 17,000 interactions and funds 3,500 projects.

428. The mission of the Canada Institute for Scientific and Technical Information (CISTI) - which is part of the National Research Council - is to ensure that Canadians have access to the world's scientific, technical, medical and related information, and to publish validated scientific and engineering research information for the benefit of the Canadian and international scientific and engineering communities. The Institute provides services in several areas, including reference and referral, online databases, current awareness and document delivery. In 1994, it entered new service areas, including publishing, Internet and consulting services. CISTI received about 500,000 requests for information in 1994/95. InfoAlert has replaced the Canadian Selective Distribution of Information Service, an electronic current awareness service.

429. Other institutions and sources include the Canada Mortgage and Housing Corporation, Department of Fisheries and Oceans, Environment Canada, the National Library of Canada, the National Museum of Canada, the National Museum of Natural Sciences, the National Museum of Science and Technology, Natural Resources Canada and Statistics Canada. The Canadian Broadcasting Corporation continues to diffuse scientific information through regular programmes on radio and television. The Museum of Civilization, described above in paragraphs 388-389, also contributes to diffuse information of scientific nature.

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MEASURES ADOPTED BY THE GOVERNMENTS OF THE PROVINCES

British Columbia

Article 15. Right to take part in cultural life and to enjoy the benefits of scientific progress and the protection of authors' interests

558. See articles 2 and 27 in British Columbia's Contribution to Canada's fourth report under the International Covenant on Civil and Political Rights.

559. The Government of British Columbia funds a number of programmes that create opportunities for science and technology to generate social and economic benefits for British Columbians. The total government science- and technology-related expenditures exceeded \$100 million in 1993/94.

560. The Ministry of Employment and Investment's Science and Technology Division plays a lead role in this area and funds specific programmes in research and development, infrastructure, human resources development and public awareness. This funding provides support for the Science Council of British Columbia, other research organizations, technology-development transfer, scholarships, fellowships and financial-assistance programmes. The Science Council is a provincial agency with a 15-member volunteer board, funded by the government to promote economic development and enhance the quality of life through innovative applications of science and technology.

561. In 1989, to raise public awareness of science and technology, the government declared "Science and Technology Week". This annual event sees science-related agencies and industries teaming up to sponsor events and activities that encourage public participation, including broadcasts, lectures, open houses and displays.

562. Multiculturalism British Columbia in 1991/92 supported the British Columbia Association of Broadcasters' media campaign, "If You Don't Stop Racism, Who Will?". The branch provides advice on multicultural programming to television, radio broadcasters and newspapers.

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New Brunswick

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1381. In 1991, the Government changed the name of the Department of Commerce and Technology to the Department of Economic Development and Tourism. Although the Science and Technology Secretariat and the Minister's Advisory Board on Science and Technology have been dissolved, many scientific projects and activities are still undertaken by the Department.

1382. In 1992, the Canada/New Brunswick Cooperation Agreement on Economic Development succeeded the earlier Subagreement on Industrial Innovation and Technology Development. Similar to the earlier Subagreement, the Cooperation Agreement provides funding to universities, research centres, industry and other organizations for research and development in New Brunswick. Incutech Brunswick Inc. remains active. It provides shared facilities and services for young start-up companies with research and development activities. The Research and Productivity Council is a provincial organization that assists companies in research, testing, analysis and development of new products. Other provincial programmes that assist scientific progress include the Medical Research Fund of New Brunswick, scholarships to university and community college students, and training programmes.

1383. In 1994, the Province of New Brunswick formed the Electronic Information Highway Secretariat within the Department of Economic Development and Tourism. There is a Minister of State for the Electronic Information Highway.

1384. New Brunswick continues to be represented on many national councils, boards and committees concerning matters of science and technology. National Science and Technology Week is held annually in association with federal activities.

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MEASURES ADOPTED BY THE GOVERNMENTS OF THE TERRITORIES

Yukon

1720. The Yukon government supports applied technology and research through the following types of programmes.

1721. The Canada-Yukon Economic Development Agreement has various programmes that are financed by the federal and Yukon governments in two successive five-year agreements. All programmes noted below expired in March 1996, except for the Small Business Cooperation Agreement, which expired in 1997. It should be noted that one position on decisionmaking committees is reserved for a representative of the Council for Yukon Indians.

1722. The Forestry Cooperation Agreement provided financial assistance for the development of the Yukon forestry sector, and in particular for the development and application of methods, including silviculture practices, that will contribute to the sustainable development of the timber resource.

1723. The Renewable Resources Cooperation Agreement contributed to renewable resource industries, which expand the base of the Yukon economy, thus promoting a more stable and self-reliant economy.

1724. The Mineral Resources Cooperation Agreement supported innovations in exploration, mining and processing, and environmental technology, as well as making available high-quality geological, geochemical and geophysical information, which will contribute to the maintenance and development of the mineral industry, a continuing base of the Yukon economy.

1725. The Small Business Cooperation Agreement provided financial assistance to small businesses for ongoing improvements in technology, and product and service improvement.

1726. The Business Development Fund provides assistance to small and medium-sized Yukon businesses and, occasionally, business organizations such as industry associations. Among the rationales for such a programme is the difficulty that small and medium-sized business face in securing financing from traditional lending agencies, particularly in small Yukon communities. This programme is currently under review.

1727. As well, the Yukon Science Institute is situated on the campus of Yukon College. There are annual science fairs and, in 1995, Whitehorse hosted the National Science Fair.

1728. The constitutionally entrenched Yukon First Nations Umbrella Final Agreement contains specific provisions regarding the role of the Yukon government in the area of First Nations economic development. The claim established the following obligations on the Yukon government:

(a) Cooperating with the federal Government and 14 individual First Nations in developing economic opportunity plans and regional economic development plans;

(b) Assisting Yukon Indian people to make investments in public corporations.

1729. With respect to the Energy Conservation Assistance Act, the following programme changes have taken place.

1730. The Saving Energy Loans Program, which provides assistance in thermal-efficiency improvements in residential buildings, has been transferred to the Yukon Housing Corporation.

1731. The Yukon Energy Alternatives Program (YEAP) has been cancelled, although some projects previously eligible under YEAP may still individually receive government support.