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IMPLEMENTATION OF THE INTERNATIONAL COVENANT ON ECONOMIC  
SOCIAL AND CULTURAL RIGHTS

Second periodic reports submitted by States parties to the Covenant  
concerning rights covered by articles 13 to 15, in accordance  
with the third stage of the programme established by the  
Economic and Social Council in its resolution 1988 (LX)

Addendum

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND  
AND DEPENDENT TERRITORIES\*

[23 September 1993]

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C. Scientific progress and its applications

62. In the United Kingdom the enjoyment of the benefits of scientific progress and its applications has always been regarded as a basic right for all. No legislation or other government measures have been taken, or are considered necessary, to guarantee that right.

63. Science is promoted in schools, in higher education institutions, in Research Council institutes, and in government and private sector laboratories. Promotion of science in schools, colleges, etc.

64. The National Curriculum for schools has established science as a core subject for study. By the year 2000 all pupils reaching the age of 16 will have studied science at school from the age of 5. Government policy is that the science curriculum should be suitable both to equip those who will make a career in science and to provide a sound scientific background for those who do not.

65. In higher education government policy is that places should be available for all who have the necessary intellectual competence, motivation and maturity to benefit from it and who wish to do so. Within this context the Government sets the framework and broad strategy for higher education. This provides for student and employer demand to help shape the pattern and nature of teaching provision in the sciences and other subject areas and to determine the balance between them, and for academic priorities to determine the overall direction of research.

66. The balance of public funding for higher education has been changed from block grant to tuition fees to encourage recruitment to the more expensive laboratory and workshop based courses. There have also been specific initiatives to promote engineering and technology. A policy of selective research funding directs support to institutions and

departments with a large volume of high quality basic and strategic research.

67. Government policies for schools and further education, together with those for higher education, and the general aim of achieving equality of status and standards between academic and vocational qualifications, serve to enable and encourage more young people to pursue the study of science subjects throughout their period in full-time education and beyond.

Promotion of scientific research

68. Basic and strategic scientific research is carried out largely under the auspices of the nation's five Research Councils and in universities.

69. The five Research Councils are:

- Agricultural and Food Research Council;
- Economic and Social Research Council;
- Medical Research Council;
- Natural Environment Research Council;
- Science and Engineering Research Council.

70. They support research in their own institutes and in universities through project grants. They are funded by the Government through its Science Budget which it has increased by 22 per cent in real terms (i.e. after taking account of inflation) since 1982. The Science Budget in the financial year 1992-1993 totals £1.002 billion.

71. The Royal Society and the Royal Academy of Engineering also receive grant-in-aid from the Science Budget.

72. The Government funds universities through block grants for teaching and research, allocated by the Funding Councils. Its policy for higher education is set out in its White Paper "Higher Education - A New Framework" (Cm 1541, published May 1991). A total of £673 million of public funds was allocated by the Universities Funding Council for scientific research in the academic year 1992/1993.

73. Strategic and applied scientific research is also supported in government research establishments and agencies sponsored by departments using their own funds (i.e. outside the Science Budget referred to above). Total expenditure on civil research and development in such establishments in 1992-1993 is expected to be about £1 billion.

Protection of the environment

74. The Government recognizes the need to improve environmental standards. In September 1990 it published its White Paper "This Common Inheritance - Britain's Environmental Strategy" (Cm 1200). A year later it published a progress report on the year's achievements: "This Common Inheritance - The First Year's Report" (Cm 1655). The environment is now firmly part of the Government's policy-making progress.

Public understanding of science

75. The Government believes that the wide dissemination of knowledge and understanding of scientific and technological developments is important in its own right and as an integral part of the scientific process.

76. The establishment of science as a core subject in the National Curriculum provides a foundation in the schools for a scientifically literate society.

77. The scientific community itself has a key role to play in improving public awareness of science and technology, its achievements and its limits. The Government supports the work of the Research Councils, the Royal Society and others in achieving this; and would draw attention in particular to the role of the Committee on the Public Understanding of Science, which it supports through a grant to the Royal Society, as providing a focal point for such activity.

#### Intellectual property rights

78. All research organizations which depend for their support on public funds are encouraged to realize the commercial benefits of their research. The protection and management of intellectual property is an important part of this process. The Office of Science and Technology published a report, "Intellectual Property in the Public Sector Research Base", in September 1992 to try to raise awareness of the measures which research organizations might take.

79. Most institutes of higher education and the major research laboratories in the United Kingdom have set up industrial liaison units to handle intellectual property negotiations for research contracts and to take measures to protect intellectual property with possible commercial value. The Government has encouraged local initiative by allowing universities to own the intellectual property arising from standard Research Council grants, subject to some safeguards. Government research agencies are also given strong encouragement to exploit the commercial potential of their work whenever possible.

80. The Department of Trade and Industry has provided financial assistance to universities to set up and enhance their industrial liaison units and to carry out technology audits of research that might have potential to be developed commercially.

#### Technology transfer

81. The Government recognizes the importance of technology transfer and therefore fosters technology transfer activities by:

- (i) Financially supporting the development of regional technology centres which assist United Kingdom businesses to use and exploit modern technology;
- (ii) Participating in the European Community's Strategic Programme on Innovation and Technology Transfer (SPRINT), which supports the development of technology transfer networks within Europe;
- (iii) Helping companies through a wide range of generic technology transfer programmes (for instance "Materials matter", "Managing into the 1990s" and "Biotechnology means business") which help firms understand and exploit modern technology and its management;
- (iv) Providing specific help through its research agencies, which help firms of all sizes to address technical problems and provide scientific and technical services on a fee paying basis;
- (v) Assisting groups of United Kingdom experts to visit overseas countries so that they can learn about advanced technologies; and
- (vi) Providing information via the Overseas Technical Information Service about technical advances in other countries.

#### Development of international collaboration

82. The Government firmly believes in the importance of a free interchange of scientific ideas and information, subject only to the requirements of national security and, where appropriate, to commercial confidentiality.

83. Scientists and scientific organizations in the United Kingdom are engaged in many forms of international collaboration and interchange. Central to such activity is the wide range of reciprocal contacts that research teams and individual scientists make with their colleagues in other countries. Such contacts are facilitated by a number of schemes including, for example, travel grants and overseas field work grants from the Royal Society and the Royal Academy of Engineering.

84. The general approach of the United Kingdom towards such international collaboration in the field of science and technology is to support research which meets one or more of the following criteria:

Is not already under way domestically or through other international channels; and where the benefit from collaboration is greater than the unavoidable extra costs involved;

Is complimentary to existing national and international activities;

Improves the quality of science and/or which offers scope for technology transfer;

Is aimed at improving industrial competitiveness or tackling transnational issues, for example, health, environmental protection or economic problems;

Involves large-scale investment with sharing of costs and risks.

85. The United Kingdom plays an active role in the scientific activities of international forums such as the Conference on Security and Co-operation in Europe (CSCE) and the OECD Committee for Scientific and Technological Policy (CSTP).

86. Within Europe, scientific programmes operated under the auspices of the European Community (EC) represent an increasingly significant proportion of the United Kingdom collaborative scientific effort. United Kingdom science is strongly represented in the specific programmes of the EC Research and Development Framework Programme.

87. Other international activities include those based on the usage of large facilities (for example, the European Organisation for Nuclear Research (CERN), the European Synchrotron Radiation Facility (ESRF), the Institute Laue-Langevin (ILL)); other pan-European organizations (e.g. the European Space Agency (ESA), the European Molecular Biology Laboratory (EMBL), the European Science Foundation (ESF) and the Committee on Science and Technology (COST)); and a wide range of smaller-scale bilateral and multilateral programmes directed towards research, training and information exchange.

88. Outside the specifically European context, United Kingdom scientific collaboration may be at the global level (for example, the World Climate Research Programme (WCRP) and the International Geosphere-Biosphere Programme (IGBP)) or involve partners from several continents (for example, the Human Frontier Science Programme (HFSP) and international telescope projects).

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B. Right to enjoy the benefit of scientific progress and its applications (paragraph 1 (b))

286. The Hong Kong Government has taken a number of measures to promote the development of science, the application of scientific progress for the benefits of the community and the diffusion of information on scientific progress.

287. Science subjects are taught at primary and secondary schools and post-secondary educational institutions. Besides obtaining funding from benefactors and private companies, various institutions of higher education receive financial support from the Government for conducting scientific research. The Hong Kong University of Science and Technology, newly opened for classes in October 1991, is specially committed to promoting technological applications in Hong Kong and the Asia and Pacific region.

288. The Government provides facilities and services to facilitate technological upgrading in industries in Hong Kong. These include industrial estates which cater for high-technology industries; services to help industry to improve productivity; promotion of technology transfer through inward investment; establishment of the Hong Kong Industrial Technology Centre; and support for industrial research through an applied research and development scheme.

289. Both the Hong Kong Space Museum and the Hong Kong Science Museum have played an important part in the diffusion of scientific information to the public. The former, which formed the first phase of the Hong Kong Cultural Centre, was opened in October 1981. It provides the public with an exceptional entertainment venue in which knowledge of the universe, space exploration and related sciences are presented through sky shows, Omnimax film shows, exhibitions, lectures in astronomy and telescopic observations. A 20-million exhibit renewal programme was completed in July 1991.

290. The Hong Kong Science Museum was opened in April 1991. The 550 exhibits of the Museum, the majority of the "hands-on" type, cover five major areas, namely: orientation, science arcade, life sciences, technology and a children's zone. The technology area is further subdivided into computer and robotics, energy, communication, construction, transportation, food science and home technology. Its 20-metre high energy machine is the largest of its kind in the world. With a wide range of science activities, such as lectures, science film shows, fun-science activities, visits from professional groups, schools and other underprivileged groups, the Museum is a place for people of all walks of life to experience and discover the mystery of science and technology.

291. The Hong Kong Government is aware of the need to prevent the use of scientific and technical progress for purposes which are contrary to the enjoyment of human rights. The Bill of Rights Ordinance enacted in June 1991 provides, *inter alia*, that no one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment and, in particular, that no one shall be subjected without his free consent to medical or scientific experimentation. The Law Reform Commission is currently examining the law relating to information privacy. A consultation document on data protection will be released for public comment in early 1993.