

E/C.12/4/Add.8  
28 February 2001

Original: ENGLISH

ECONOMIC AND SOCIAL COUNCIL  
Substantive session of 2001

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

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

[30 January 2001]

\* The third periodic report (E/1994/104/Add.11) submitted by the Government of the United Kingdom of Great Britain and Northern Ireland was considered by the Committee on Economic, Social and Cultural Rights at its seventeenth (1997) session (see E/C.12/1997/SR.36-38). The annexes referred to in the present report are available for consultation in the Committee's secretariat.

\*\* The information submitted by the Government of the United Kingdom of Great Britain and Northern Ireland in accordance with the guidelines concerning the initial part of reports of States parties is contained in the core document (HRI/CORE/1/Add.5/Rev.2).

\* \* \*

**SCIENTIFIC PROGRESS AND ITS APPLICATION**

**United Kingdom**

**Public enjoyment and promoting understanding**

15.82 Everyone in the United Kingdom is entitled to enjoy the benefits of scientific progress and its applications. The well developed intellectual property system, by providing protection for a limited time, encourages the publication of new technological developments, promotes understanding and stimulates further research. Otherwise the only restrictions to access to, or use of, scientific progress are those necessary to protect the public from developments which are either unsafe or generally accepted to be unethical.

15.83 The Government's *Public Understanding of Science Programme*<sup>36</sup> seeks to increase public understanding and awareness of scientific facts, scientific and engineering processes and the role played by science, engineering and technology in everyday life. The programme supports a broad range of activities designed to propagate the importance of science, engineering and technology and the attractions of careers in the various scientific disciplines, including:

- administration of a grants scheme;
- provision of publications such as best practice guides and resource directories;
- engaging a wider non-technical audience in major scientific debates, such as consensus conferences and the Public Consultation on the Biosciences;
- financial support for the British Association for the Advancement of Science and the Committee on Public Understanding of Science small grants scheme; and
- National Science Week 2000 which included over 7,000 events all over the United Kingdom and attracted 1.4 million visitors.

15.84 In partnership with the Wellcome Trust, the Government has also undertaken a review of science communication in the United Kingdom. This comprised two projects: the first mapped the provision of facilities for the communication of scientific information and activity; the second was a national survey of public attitudes towards science. The Government expects the results of these projects to encourage cooperation and further co-ordination between those who are engaged in communicating such knowledge and activities and to assist them in finding new ways to reach their target audiences. It is hoped this will lead to knowledge and understanding of scientific facts and processes among a wider proportion of the general public.

### **Promoting women in science, engineering and technology**

15.85 The *Promoting SET for Women Unit* was established in 1994 following recommendations in a report on women in science, engineering and technology (SET). The Unit's main aims are to:

- attract more girls into SET subjects;
- promote SET as a fulfilling career in industry, higher education and the public sector at all levels;
- identify ways of improving the progression of women up the career ladder; and
- work with all other organizations active in this area and co-ordinate and focus effort.

The Unit proposes to achieve these aims through a variety of activities, including:

- a new area to its Web site ([www.set4women.gov.uk](http://www.set4women.gov.uk)) launched this year, showing United Kingdom statistics on women's scientific related education and employment;

- an imminent study to look at the issues facing women with SET qualifications who have had a career break and want to return to SET related employment;
- a twice yearly careers magazine to be launched in Autumn 2000, targeted at changing the perceptions and attitudes of the public towards women and SET careers;
- developing, with the *WISE Campaign* and women's membership based organizations, a new database of women role models to speak in schools;
- updating the *European Women in SET Experts database* for re-launch at the experts conference scheduled for September 2000.

### **Science festivals**

15.86 In addition to the National Science Week, there are a variety of science festivals throughout the United Kingdom such as the Edinburgh International Science Festival, now in its thirteenth year, and festivals in the Orkneys, at Wrexham and at Cheltenham. The year 2000 will continue to see a number of activities related to science, engineering and technology, including the completion of Millennium Fellowships which are designed to bring scientists and community groups together. South Kensington (Imperial College and the Museums) hosted a three weeks science and arts festival *Creating Sparks* in September 2000.

### **Science centres**

15.87 Millennium Commission funding will lead to a substantial increase in the number and size of science centres in the United Kingdom. The Commission is investing £250 million in the creation of 14 new science and technology centres such as the National Space Science Centre in Leicester and *Our Dynamic Earth* in Edinburgh. The science centres will provide opportunities for adults and children to find out more about science and the contribution it makes to our lives. In Wales, the science discovery centre *Techniquest* attracts over 100,000 visitors each year and has an outreach programme for schools including a travelling planetarium.

### **Science museums**

15.88 Science museums also promote the understanding of science and technology. Important museums or scientific collections in the United Kingdom include the Natural History and Science Museums in London, the Museum of Science and Industry in Manchester, the Museum of the History of Science in Oxford and the Royal Scottish Museum in Edinburgh. The collections of the National Museums and Galleries of Wales show how innovations in science and technology gave rise to the development of the coal, slate and woollen industries in Wales. The museums' style of engaging the public is also evolving. The new Wellcome Wing in the London Science Museum examines contemporary science, with visitors being encouraged to engage in debate on the regulation and application of modern science.

### **Promotion of scientific research**

15.89 Most expenditure on research and development (R&D) in the United Kingdom is undertaken by private industry either within industry itself or through contracts with university or other establishments. Expenditure on research and development in the United Kingdom in 1998/99 was £15,553 million, 1.8 per cent of GDP; of this, £5,707 million or 37 per cent of the total expenditure, was provided by the Government. Government funding for research is provided to develop technology and the economic well being of the country in cooperation with industry and the scientific community, to strengthen the science and engineering base, and to serve particular departmental responsibilities. Funding is channelled through a number of Departments, including the Department of Trade and Industry, the Department of the Environment, Transport and the Regions, the Ministry of Agriculture, Fisheries and Food, the Department of Health, the Ministry of Defence, the Department for International Development and the Scottish Office.

### **The Foresight Programme**

15.90 A central theme of the 1993 White Paper, *Realising our Potential: a Strategy for Science, Engineering and Technology*, was that steps should be taken to harness the United Kingdom's strength in science and engineering to the creation of wealth by providing closer cooperation and partnership between scientists and industrial and commercial users of research. The *Foresight Programme* brings together Government, business, the research base and voluntary and consumer organizations to examine possible future needs and opportunities in markets and technologies and to identify what can be done to meet these challenges. The programme operates through 10 sectoral and 3 thematic panels: Ageing Population; Crime Prevention; Manufacturing 2000; Built Environment and Transport; Chemicals; Defence, Aerospace and Systems; Energy and Natural Environment; Financial Services; Food Chain and Crops for Industry; Healthcare; Information, Communications and Media; Materials; and Retail and Consumer Services. Particular efforts are made to encourage wide participation, including young people through the *Young Foresight* project.

### **The Scientific Budget and university research funding**

15.91 The Office of Science and Technology, an entity within the Department of Trade and Industry, is responsible for a specific Science Budget designed to strengthen the science and engineering base by funding research and postgraduate training in universities and colleges of higher education and in establishments operated by the seven Research Councils,<sup>37</sup> and to provide grants in aid for teaching and research by the Royal Society (for science) and the Royal Academy of Engineering. The Science Budget for the financial year 2000/01 amounts to £1,536 million, an increase of 10 per cent in real terms since 1994/95. In addition to the Science Budget, the Government is providing approximately £1,200 million (1999/00) for teaching and scientific research in universities through the Funding Councils in England, Scotland and Wales and the Department for Education for Northern Ireland.

15.92 Schemes in which the Research Councils are engaged and which are financed from the Science Budget fall into the following broad categories:

- Postgraduate training: *The Cooperative Awards in Science and Engineering (CASE)* and *Industrial CASE* schemes, in which industry plays a role in determining the subject of research and provides assistance during PhD courses. Typically, firms provide opportunities for the student to use their laboratories and may provide relevant material. Included in this scheme are *Post-Graduate Training Partnerships* (1992 to 2003) involving Research and Technology Organizations which are designed to increase the output of high quality professionals with skills, experience and training relevant to the needs of industry.
- Fostering entrepreneurial culture in universities: *Science Enterprise Challenge* is a competition to establish up to eight centres of enterprise in universities. The centres are intended to act as a focus for fostering commercialization of research and new ideas, for scientific entrepreneurship and for incorporating the teaching of enterprise in the science and engineering curricula.
- Encouraging academic researchers to improve their connections with industry: There are two main schemes:
  - *Realising our Potential Awards*: which is intended to reward those academic researchers who have made substantive connections with industry for strategic (not contract) research by giving them funds to enable them to carry out innovative research in an area of their own choosing.
  - *Industry Academia Partnership Prizes*: which is designed to reward those university departments which have made the greatest improvement in their connections with industry at a strategic level during the previous year.
- Encouraging universities to exploit the results of research more vigorously:
  - *University Challenge Fund*: is a competition under which an injection of seed funding is provided to enable higher education institutions to take the first steps towards turning successful research into business propositions by paying for scoping studies, market research, prototypes and the setting up of “spin-out” companies.

In addition, research funded by the Economic and Social Research Council includes the economic and social field and the development of economic and social policy.

### **Technology transfer**

15.93 One of the objectives of the Department of Trade and Industry is to increase interaction between the science, engineering and technology base and business. Arrangements for technology transfer funded by the Department of Trade and Industry with other government departments include:

- *TCS* (previously known as the Teaching Company Scheme) is a government-funded technology and knowledge transfer mechanism that helps companies and the “knowledge base” to work together on projects central to the needs of participating companies. No grants are available to companies through *TCS*, although a grant is paid to the participating “knowledge base” partners (a university or other higher education institute or a public or private research institute or organization), because most of the direct costs of a *TCS* Programme are borne by them. *TCS* involves graduates (*TCS* Associates) working in companies, normally for two years, on technology transfer projects. They and their projects are supervised jointly by personnel in the “knowledge base” and in business. Each *TCS* Programme may involve one or more Associates and can last for two or three years. Total government expenditure on *TCS* in 1999/00 was £18 million and the overall budget for 2000/01 is over £23 million. Currently (end-July 2000) there are 760 *TCS* Programmes; 90 per cent involve small and medium size enterprises - 55 per cent with companies employing less than 50 people and 35 per cent with companies employing between 50 and 250 people. Almost all higher education institutes are involved and *TCS* is developing to encompass other members of the “knowledge base”, for example, research and technology organizations.
- *Faraday Partnerships*. The 1998 White Paper, *Our Competitive Future*, announced the setting up of a national network of *Faraday Partnerships* building on the initial work of the Engineering and Physical Sciences Research Council (EPSRC) in exploiting R&D in particular areas. The aim of *Faraday Partnerships* is to make a more coherent use of existing support mechanisms by establishing “partnerships that are widely recognized for their technological expertise and that industry will turn to, as a first choice source of help, in new product and process development”. It is based on the following principles:
  - a two-way flow of industrial technology and skilled people between the science and engineering base and industry;
  - partnerships between industrially oriented research organizations and the science and engineering base;
  - core research underpinning product and process development; and
  - industrially relevant post-graduate training.

Four new Partnerships were announced in June 2000 to join the existing four that were approved in 1997. As a result of the *Science and Innovation* White Paper, which was published in July 2000, it is planned to double the rate of starting new Partnerships to reach a total of 24 *Faraday Partnerships* in the year 2002/03.

### **Monitoring of use of science and technology and protection of the public**

15.94 The United Kingdom has a comprehensive regulatory framework for monitoring the use of science and technology. This consists of a network of expert advisory and regulatory bodies which advise the Government on the safety of products and processes,

as well as the social and ethical aspects of science. Examples are the Advisory Committee on Novel Foods and Processes and the Committee on the Safety of Medicines.

15.95 Some scientific developments give rise to profound ethical and social issues. For example, modern biotechnology has the potential to change healthcare and agriculture significantly. The Human Genetics Commission and the Agriculture and Environment Biotechnology Commission have been created to consider the wider issues raised by scientific developments in these areas. Both will involve and consult on a regular basis with organizations engaged in such developments and with the public.

15.96 It is important that all these bodies operate in an open way and that the decisions and recommendations they make are well founded. The Government is consulting on a proposed code of practice for scientific advisory committees to promote this approach. It is also important that the Government has the best quality scientific advice available. Guidelines on the use of scientific advice in policy making have recently been revised and re-issued.

### **Protection of the environment and promotion of sustainable development**

15.97 The Government published *A Better Quality of Life: A Strategy for Sustainable Development for the United Kingdom* in May 1999. Effective protection of the environment is one of the four main objectives of sustainable development and to measure progress to that end 15 headline indicators have been developed with a further 132 indicators to set out the baseline assessment for reporting. An annual sustainable report will be published by the Government (the first later this year) on action taken and proposed. A new and independent Sustainable Development Commission which is being established by the British Government, the Scottish Executive and the National Assembly for Wales will also review progress and aim to build consensus on necessary action. The annual report of “green ministers” (due in November) will complement the annual sustainable development report. The Environment Agency, created by the 1995 Environment Act, has a legal obligation to protect and improve the environment in England and Wales.

### **International collaboration**

15.98 The extent of the United Kingdom’s scientific collaboration with other countries and international organizations has been described in the Second and Third Reports under the Covenant. Such collaboration is wide ranging and includes both multilateral and bilateral arrangements.

15.99 Significant areas of cooperation are the scientific programmes of the European Union. The Fourth Framework Programme of the EU, in which the United Kingdom participated in more than half of the projects, was completed in 1998. The Fifth Framework Programme, intended to run from 1999 to 2002, will continue with four thematic programmes covering health and life sciences; information communication

technology; industrial technology and transport; and energy, environment and sustainable development; and three cross-cutting programmes covering international cooperation; promotion of innovation and the encouragement of small and medium enterprise participation; and promotion of researcher training and mobility of socioeconomic research. The budget for this Programme is £9.5 billion. The United Kingdom's contribution to the Fourth Programme was approximately 16 per cent of the budget and its contribution to the Fifth Programme is likely to be similar. The Second Activity of the Fifth Programme, like that of the Fourth, provides for scientific and technological collaboration with the newly independent States of the former Soviet Union and, in addition, countries of the Euro- Mediterranean region and Developing Countries.

15.100 The United Kingdom continues to participate in EUREKA (now comprising 29 member countries extending from the Russian Federation in the east to Iceland in the west). By 1999, over 700 projects with a value of £8.4 billion had been completed and a further 694, with a value exceeding £5.6 billion and involving almost 3,000 organizations, are under way. In the COST programme (European Cooperation in Science and Technical Research), the United Kingdom takes part in almost all of the 180 projects which are currently valued at some 360 million Euro. Other organizations in which the United Kingdom participates include the European Space Agency, the European Organization for Nuclear Research, the European Synchronization Radiation Facility, the European Science Foundation and, outside the European context, the World Climate Research Programme and the International Geosphere-Biosphere Programme.

### **Bilateral cooperation staff**

15.101 Bilateral cooperation with other governments are serviced through staff in British Embassies and High Commissions and the offices of the British Council. There are currently Science Attaches in 10 British Embassies and Diplomatic Missions.

### **Weapons and toxic substances**

15.102 The development of means of causing harm to others by weapons or toxic substances has also resulted in cooperation between States. The United Kingdom is a party to the 1968 Nuclear Non-proliferation Treaty, the 1972 Biological Weapons Convention, the 1993 Chemical Weapons Convention and the 1997 Ottawa Convention on Landmines. In implementation of the 1993 Convention, the Chemical Weapons Act 1996 prohibits the possession or use of toxic or chemical weapons in the United Kingdom and empowers the Secretary of State to order their destruction. All stocks of landmines covered by the 1997 Convention under the control of the British Government have been destroyed except for those retained for training in mine clearance.

---

<sup>36</sup> See paragraph 315 of the Third Report.

<sup>37</sup> See paragraph 311 of the Third Report.