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ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS

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

REPUBLIC OF KOREA

[27 June 2007]

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**Measures to facilitate the development and diffusion of science**

451. In the development of science and technology, the most important element is investment in research and development (R&D). Korea has made continuous efforts to expand its investment in R&D. The R&D investment rate compared to GDP increased to 2.64 per cent in 2003 from 1.82 per cent in 1991. With the steady expansion of R&D investment, the number of patent applications overseas also rose from 37 cases in 1991 to 2,949 cases in 2003, and the number of related theses increased from 1,869 cases in 1991 to 18,787 cases in 2003.

452. In 1973, in order to secure a space for science and technology research, the Government constructed the 27.6 km<sup>2</sup> Daedeok Research Science Town in Daejeon City. On 28 July 2005, the existing research complex, Daedeok Techno-Valley, Daejeon 3-4 industrial complex and others, which together cover a total of 70.4 km<sup>2</sup>, were designated as the Daedeok Innopolis. This research complex currently accommodates seven public institutions, 20 Government research institutions, 10 Government-backed institutions, 33 private research institutes, six higher education institutions, and 765 manufacturing and venture enterprises.

453. The supporting measures provided for the research institutions were described in paragraph 618 of the initial Periodic Report. Such research institutions associated with science and technology (i.e. Government research institutions and other research institutions) have 10,163 research personnel working on various research projects. The Government provided 2.2 trillion won in support in 2005 and will provide another 2.5 trillion won in support in 2006.

454. The Government implements overseas training programmes. Specifically, it dispatches researchers for a certain period of time to overseas research centres or colleges located in advanced countries for the purpose of improving the Korean researchers' R&D capacity and enabling them to acquire experience with advanced research.

**Table 86**

**Record of overseas research**

(Unit: persons)

Year/Classification	Colleges	Research institutions	Industries	Total
1982-2004	3 864	837	191	4 892
2005	356	58	29	443

**Measures for development of science education and human resources**

455. Science high schools were established by the Government to provide pragmatic science education. As of February 2006, there were 17 schools with a total of 3,107 students. Most of the graduates of these schools continue their studies at the Korea Advanced Institute of Science and Technology (KAIST). KAIST aims to produce researchers and scholars of science and technology by teaching both advanced theories and practical applications skills. The outcomes so far have been as follows:

**Table 87**

**Record of graduating students from KAIST**

(Unit: persons)

Courses	Prior to 2000	2001	2002	2003	2004	2005	tOTAL
Masters	12 554	705	774	768	823	703	16 327
PhD	4	161	429	386	394	399	6 147

**Supporting technological development of private firms**

456. To encourage private firms to develop technology and strengthen their competitiveness, the Government is implementing various policies. First, it grants tax incentives to firms on the amount of money invested annually in technology and manpower development by private firms. In addition, goods imported by R&D divisions in businesses or industrial technological research associations, for R&D purposes, are

exempted from tariffs. Second, the Government supports some of the research funds that are put into basic and original technology development by private companies.

**Table 88**

**Status of annual investment in specific R&D projects**

(Unit: 100 million won)

Classification	By 1999	2000	2001	2002	2003	2004	Total
Amount of research fund	37 138	5 825	6 496	6 731	7 167	7 271	70 628
Government	24 369	4 389	5 253	5 730	5 894	5 667	51 302
Private firms	12 769	1 436	1 243	1 001	1 273	1 604	19 326
No. of projects	17 113	1 806	1 921	2 251	2 430	2 149	27 670
No. of participating firms	8 351	922	914	724	680	794	12 385

457. With shared R&D support from the Government, a total of 27,670 projects were completed as of the end of 2004. For successful examples, there are developments of polyester film, 4M/16M DRAM, a cancer-treating enzyme genetic discovery, 60K genome oligonucleotide, and terra-level flash memory development, among others. As a result of these successful projects, 62.4 billion won in technical royalties were collected and reinvested in R&D projects.

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**Guarantee of freedom in scientific research and creative activities**

462. As mentioned in paragraph 616 of the First Periodic Report, the Constitution states that the freedom of scientific research and creative activities shall be protected by law. Measures regarding the constitutional guarantee of the freedom to exchange much information are described in Paragraphs 620 and 621 of the initial Periodic Report.

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**International science and technology exchanges**

466. International exchanges of science and technology with advanced nations are explained in paragraphs 625-631 of the First Periodic Report and paragraphs 487-494 of the Second Periodic Report. Korea has concluded a total of 65 agreements with 44 countries for science and technology and nuclear cooperation.

467. Since the 1950s, the United Nations has played a major role in providing aid to Korea. Over a period of 40 years, up until 2004, the United Nations Development Programme (UNDP) provided a total of US\$ 78.85 million for technology development personnel, social welfare, environment field and other areas. After Korea became a member of OECD in 1996, UNDP changed Korea's classification as a recipient country

to a donor country, which resulted in the decrease of its grant amount and finally ended UNDP support projects in Korea in 2000.

468. The Korean Government has cooperated with UNDP and undertaken national projects for UNDP with the target of development support for developing countries. In addition, after joining the Committee for Science and Technological Policy (CSTP) of the Organisation for Economic Co-operation and Development (OECD), it has participated in the general meetings and various expert groups.

469. After joining OECD in December 1996, Korea hosted UNCTAD's Seoul Conference on Facilitating International Technology Co-operation in October 1997, and has been very active in pursuing OECD projects (national innovation system research for underdeveloped countries) and hosted the General Meeting of the 88th OECD CSTP in October 2006 in Seoul, thereby confirming the Government's commitment to active participation in the globalization of industrial research, intellectual property rights, and the technology programme.

470. Korea is interested in international joint research projects to strengthen its R&D capabilities. From 1985 to 2005, a total of 122.6 billion won was invested in 2,044 projects to conduct joint research projects with major advanced countries (e.g. Japan, Russia, the United States of America and Germany). From the early 1990s, for the purpose of achieving the mutually beneficial joint research, 10 overseas research institutes were established in the United Kingdom, Germany, Russia, and the People's Republic of China, with a total of 17 overseas organizations, including overseas liaison offices and a cooperative centre, in operation.

471. In 2005, 11.5 billion won was invested in a total of 133 projects, including projects with countries such as the United States of America, Japan, Germany, France, the United Kingdom, the People's Republic of China, and other multilateral research endeavors.

472. The Korean Government is actively participating in various seminars, workshops, symposiums with international organizations, including the Colombo Plan, UNESCO, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO), the Investment Promotion Service of the United Nations Industrial Development Organization (UNIDO/IPS), the International Monetary Fund (IMF), and the International Labor Organization (ILO). Furthermore, to strengthen cooperation with international organizations, the Government donates US\$ 1 million to UNDP and US\$ 700,000 to ESCAP annually, with the latter donation provided through the Ministry of Foreign Affairs and Trade.