ANNEX
(to the Ethical Framework of Research)

Ethics in Ministerial Policies of Research and Development and in Important International Documents

1. Ethics in Ministerial Policies of Research and Development

Issues relating to ethics were reflected in the policies of a number of ministries and other administration authorities. They are, in particular, the Ministry of Culture, the Ministry of Defence, the Ministry of Transport, the Ministry of Justice, the Ministry of Agriculture, the Academy of Sciences of the Czech Republic, the Czech Mining Office, and the State Office for Nuclear Safety. The list should be completed by the Good Scientific Practice of the Grant Agency of the Czech Republic mentioned in the Ethical Framework of Research.

The policy of the Academy of Sciences of the Czech Republic (hereinafter referred to as "ASCR") deals with the issues of ethics in the detailed manner and states that ASCR staff are governed by valid legal regulations, principles of civic ethics and generally accepted ethical principles. However, sciences operate in the environment and within the relations which are not possible to regulate in full detail by legal provisions. Sensitive issues of an ethical nature may arise from any scientific work. In order to solve such problems and as a platform for the discussion on how to apply ethical principles in sciences and research, the Scientific Board established in 2002 the Commission for Ethics of Scientific Work (hereinafter referred to as the "Commission"). This Commission will continue to function as a permanent body of ASCR dealing not only with general principles but also with respective particular cases of violations of ethics of scientific work.

The climate at a workplace and a personal example of managing scholars, which are indispensable and cannot be replaced by a written standard, are of decisive importance in terms of adhering to ethical principles of scientific work.

A number of codes of ethics issued by universities, academies and other research organisations are to be found abroad. The Commission has already made available for scientific units of ASCR a document entitled "Memorandum on Scientific Integrity" published by All European Academies (ALLEA) which ASCR is a member of. The Commission namely stressed the part of the document summarising frequently occurring breaches of ethics of scientific work and recommended to all scholars, in particular managers at all levels, to consistently monitor whether such breaches occur within their unit.

Specific ethical issues relating to medical and biological sciences are becoming profoundly important. In this field basic ethical standards are defined by laws, regulations and recommendations of a different legal force and a degree of binding effect. ASCR does not and will not conduct research which would not be in compliance with such standards. As regards the sensitive issues of research, such as research of stem cells and cloning, ASCR will support a legal regulation which will prevent misuse of obtained findings, and at the same time it will enable research merely for medical purposes as recommended by international scientific societies.

Principles of general ethics of scientific work, which are common for scientific and research units of all branches of ASCR, can be summarised as follows:

- to provide true information when applying for subsidies on research objectives and projects;
- to treat results of literature study, monitoring or experiments impartially;
- to include sources when taking over results of other scholars;

- to provide the general public with information on the benefits of research results prudently;
- to respect authorship and co-authorship in publishing research results;
- to adhere to specified rules when working with confidential data;
- to respect copyrights when reproducing published results and texts or when using software.[1]

Adherence to such principles is one of the fundamental duties of researchers and to watch over them is an obligation of managers at all management levels. Junior researchers are informed on principles of ethics in scientific work in an informal manner by their on-job trainers as well as within Courses of Fundaments of Scientific Work held by ASCR.

Some ministries directly stated in their policies that either ministries themselves (e.g. the Ministry of Defence, the Ministry of Agriculture) or their respective research organisations would draw up codes of ethics which would be applied in practice (e.g. policies of the Ministry of Transport and of the Ministry of Defence). Other ministries will notify or recommend their respective research institutions to publish similar codes of ethics. They are for example the Ministry of Culture and the Ministry of Agriculture. The State Office for Nuclear Safety will recommend the State Office for the Radiation Protection and the State Office for Nuclear, Chemical, and Biological Protection to issue their respective codes of ethics. The Czech Mining Office has solved this issue by Measure No. 5/2001 of the Chair of the Czech Mining Office entitled "The Code of Ethics of Public Administration Employees" which has been issued for the needs of the State Mining Administration of the Czech Republic. In addition to the general principles of ethics in research, ministerial policies contain also issues of corruption, labour morale, transparency and impartiality in relation to research and development (in particular in the policies of the Ministry of Justice and the State Office for Nuclear Safety).

2. Ethics in Important International Documents

2.1. European Commission

2.1.1. Ethics of Scientific Research in Framework Programmes [2]

Progress made in biotechnology and biomedicine required that the issue of ethics is included in each framework research programme of the European Commission. The first ad hoc ethics committee (ELSA) was initiated by the European Parliament on the occasion of launching the 2nd Framework Programme (1987-1991). ELSA consists of 12 members who are independent from both the European Commission and from political, economic, and national interests. ELSA submits to the European Commission opinions regarding ethical, legal and social aspects in research and technologies having an extensive impact on the common life of citizens.

Ethics was incorporated into the 3rd Framework Programme by means of measures for specific research on medical ethics and by studies reviewing effects of biotechnologies.

Bioethical research in life sciences and an ethical dimension of submitted draft projects concerning very sensitive matters, such as use of human embryonic and foetal tissues and utilisation of animals, were commenced by the 4th Framework Programme.

[1] The Strategy of Development in Research and Development of the Academy of Sciences of the Czech Republic for 2005-2008. A special edition of the Academic Bulletin of 26th January 2005, p. 23.
[2] European Commission/ research: http://europa.eu.int/comm/research/science-society/ethics

A scope of an ethical dimension was extended, within the 5th Framework Programme, to all other programmes, especially to the INCO Programme. New unit "Ethic in Science and Research" was set up within the Directorate Science and Society.

The European Commission published in December 2001, the "Action Plan on Science and Society" which also contains six activities relating to ethics.

Bioethics also plays an important role in the 6th Framework Programme (2002-2006) and has become an integral part of living sciences, genomics and biotechnology for health as well as other priorities such as food quality and safety. Experts involved in ethics and social sciences are expected to participate in research projects in the fields of genetic testing, research of stem cells, clinical experiences, food safety or brain related research.

A special research programme on ethics in sciences is open within the specific programme known as "Networking the European Research Area".

Ethical Rules for projects of the 6th Framework Programme[3] are contained in the Guide for Project Proposals which is generally valid.

The bioethics home web side provides exhaustive information on:

- research projects with ethical content of the 6th Framework Programme;
- the network of European and international organisations specialising in ethical issues,

and discloses overviews of:

- national ethics commissions specialising in ethical aspects of research;
- fundamental documents;
- basic legislation relating to bio-sciences at the European level and biotechnological strategies in the world.

2.1.2. Conference "Research Ethics Committees in Europe: facing the future together"[4]

The European Commission invited representatives of local and regional ethics commissions/committees in Europe to participate in the conference "Research Ethics Committees in Europe: facing the future together" held on 27 and 28 January 2005 in Brussels. The aim of the Conference was to open a debate between participants on ethical issues of research, to identify the state of the art, while good practices, obstacles and pitfalls were considered, thus leading to the identification of future initiatives, actions and activities. The final report of the Conference[5] summarises information on ethics committees, specified criteria and analyses of activities. Thus the Report is very valuable and the most current source of information as it:

- provides the widest possible list of European ethics committees;
- analyses similarities and differences between them;
- analyses major challenges and obstacles in their activities;
- compares results of analyses made by European ethics committees with information on ethics commissions in the USA, Japan and India;
- gives examples of excellence between European ethics committees;
- gives recommendations on possible cooperation between European ethics committees and on enhancement of their activities;
- provides proposals for drawing up other studies and carrying out other activities..

[3] Ethical Rules for the 5th Framework Programme
http://europa.eu.int/comm/research/science-society/ethics/rules_en.html/

[4] Conference of EU Ethics Committees: http://europa.eu.int/comm/research/conferences/2005/

[5] Provision of Support for Producing a European Directory of Local Ethics Committees (LECs). Draft Final Report.(M.Fuchs), http://europa.eu.int/comm/research/conferences/2005/resc/pdf/lec_finalreport.pdf

2.1.3. The European Charter for Researchers and a Code of Conduct of the Recruitment for Researchers [6]

The European Charter for Researchers and a Code of Conduct of the Recruitment of Researchers are a set of general principles and requirements which specify the roles, responsibilities and entitlements of researchers as well as of employers and/or funders of research. The aim of the Charter is to ensure that the nature of the relationship between researchers and employers or funders is conducive to a successful performance in generating, transferring, sharing and disseminating knowledge and technological development, and to the career development of researchers. The Charter also recognises the value of all forms of mobility as a means for enhancing the professional development of researchers.

The Charter addresses all researchers in the European Union at all stages of their career and covers all fields of research in the public and private sectors, irrespective of the nature of the appointment or employment.

The European Commission recommends all EU Member States to incorporate the stated general principles into their respective national regulatory standards within establishing the European Research Area (ERA). The Commission will annually review how this recommendation is met.

2.2. European Science Foundation[7]

The European Science Foundation (ESF) is an association of 78 member organisations, involved in scientific research in thirty European countries. It was established in 1974 and it extensively coordinates pan-European scientific initiatives. The promotion of the high quality of science at the European level is central to its interest. The Academy of Sciences of the Czech Republic and the Grant Agency of the Czech Republic (hereinafter referred to as "GA CR) represent the Czech Republic

ESF plays an important role in the development of scientific policy and provides expert assistance within the wide scientific focus.

ESF also focuses on creating rules for good practices in Europe in cooperation with its member organisations, ALLEA, CRE, and similar groups. ESF participated in the conference "European Scientific Community: towards Fair Practice" organised by ICSU in the course of the General Meeting of UNESCO held in Paris on 27 October 2001.

The principal act of ESF in the field of research ethics is the article "Good Scientific Practice in Research and Scholarship" published in the European Science Foundation Policy Briefings.[8]

This document has become a basis for drawing up regional texts of good scientific practice in research (for example a set of recommendations for good scientific practice of GA CR).

Good scientific practice in research and scholarship is essential for the integrity of science. It sets internationally valid benchmarks for quality assurance, which enable replication and further studies by other scientists. It also provides safeguards against scientific dishonesty and fraud. Good practice, thus, nurtures trust within the scientific community and between science and society, both of which are necessary for scientific advance.

The most important scientific principle is honesty towards ourselves as well as others. Honesty is both an ethical principal and a base for rules (which may differ in various branches) of professional management of scientific work or good scientific practice. To

[6] Commission Recommendation on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers. 11 March 2005 C (2005) 576 final.

[7] European Science Foundation (ESF), http://www.esf.org

[8] Good scientific practice in research and scholarship, ESF Policy Briefings, p. 10, December 2000, Strasbourg), http://www.esf.org. Published also in the Bulletin of the Grant Agency of the Czech Republic, 1/2001, p. 7.

provide principles of good scientific practice to students and junior scientists is one of the fundamental missions of universities and all educational institutions. To ensure good scientific practice is implemented and applies is then a major task of self-regulation in science.

2.3. ALLEA[9]

All European Academies (ALLEA) is a European federation of national academies of sciences and humanities. Established in 1994 it associates 52 academies from 39 countries. Its member academies are self-regulating societies of scientists and scholars. ALLEA is striving to:

- support exchanges of information and experiences between member academies;
- provide advice to European science and member academies;
- achieve excellence in science and scholarship;
- achieve high ethical standards and independence from political, commercial, and ideological interests.

2.3.1. Memorandum on Scientific Integrity

The assembly of ALLEA held in Prague in 2000 reported on the results of a modest survey among the ALLEA members on scientific misconduct, and the role of Academies in dealing with, or preventing such misconduct. Distinctions were made between three types of misconduct:

- Fraud - (fabrication, falsification, selective use of data);
- Deceit (questionable methodology, negligence in sampling, inaccurate rendition);
- Infringement of intellectual property rights (pinching ideas, plagiarism):

It is welcomed that ALLEA takes an initiative in further development of principles of good scientific practice, however some academies have already drawn up their own documents. For example:

- *Code of Science* – Estonia
- *Good Manners in Science* – Poland
- *Memorandum on Scientific Integrity* – the Netherlands
- *Scientist's Codes of Ethics* – Latvia.

The result of collective efforts is "*Memorandum on Scientific Integrity (on standards for scientific research and a National Committee for Scientific Integrity)"* which has become a sample for publishing of Good Scientific Practice of GA CR.

2.4. DFG[10]

In 1998 DFG (Deutsche Forschungsgemeinschaft) published, as a response to cases of collective fraud in Germany, the publication entitled "*Proposals for Safeguarding Good Scientific Practice"*. It is a recommendation of the Commission for professional self-regulation in science. All research institutions, which intend to apply for project funding, are obliged to lay down rules safeguarding good scientific practice in all their institutions which will conform to recommendation specified by DFG. As a safety measure an ombudsman's office was established with DFG.

[9] All European Academies (ALLEA), http://www.allea.org
[10] DFG – Deutsche Forschungsgemeinschaft, http://www.dfg.de

2.5. Denmark[11]

The system in ethics in Denmark (a Danish model) has had more than twenty years of tradition.

1. The new *National Research Strategy* adopted in 2000, namely the Chapter 11.7, solves extensions of the issues of research ethics which proved to be successful in biomedical research, in all other research fields.
2. The Act on *the System of Ethics Commission in Biomedical Research* came into effect on 1 June 2003. Its aim is to define a framework for ethical evaluation of research projects of biomedical research. The Ministry for Science, Technology and Development is the responsible party.
3. *The Danish Committees on Scientific Dishonesty* (DCSD) providing annual reports on their activities have a long tradition.
4. The Copenhagen Summer School in Research Ethics determined for ethics research committees will be held in the capital of Denmark from 27 June until 1 July 2005.
5. A publication entitled "*The Scientific Ethical Committees – Yesterday, Today and Tomorrow*" [12] was published on the occasion of the 20th anniversary of implementing the system of ethical committees in Denmark.

2.6. USA

In the USA there has been a tradition of cultivating ethics in research both at universities, which carry out research, and institutions supporting research.

1. The Association of American Universities (AAU)[13] established in 1900 and associating 62 leading research universities in the USA and Canada drew up, in 1988 for their members, the Framework for Institutional Policies and Procedures to Deal with Fraud in Research. Subsequently, it is for each university to elaborate, according to this Framework, its own ethical research rules.
2. The National Institute of Health (NIH) devotes to ethics extraordinary attention since it is involved in medical research. The NIH Ethical Programme [14] includes not only standards of ethical conduct of federal employees but also individual ethical programmes of individual institutions and centres. The documents from bioethics and research ethics are available as well.
3. Bibliography relating to the issues of ethics in research in the USA is concentrated at Case Western Reserve University, USA, in the Ethics Center for Engineering and Science. It is accessible on-line.[15]

2.7. UNESCO[16]

The UNESCO ethical mission within the UN is nowadays, when the world is undergoing essential changes, one of the five UNESCO priority areas. It is implemented through the following programmes:

- on ethics in science and engineering,
- on bioethics.

[11] http://www.fsk.dk
[12] http://www.cvk.im.dk/visArtikel.asp?.artikellD=1537
[13] http://www.aau.edu
[14] http://ethics.od.nih.gov
[15] http://onlineethics.org/bib/newbib.html
[16] http://portal.unesco.org/shs/en

The largest success of the first programme was adoption of the *Universal Declaration on the Human Genome and Human Rights* in 1997 and *International Declaration on Human Genetic Data* in 2003. The *World Commission on the Ethics of Science Knowledge and Technology (COMEST).* This deals with the ethics of the environment, the principal of preliminary prudence, the ethics of outer space, ethics of scientific knowledge and ethics of teaching in scientific education.

The *International Bioethical Commission* was set up within the second programme.

The World Conference on Science organised by UNESCO along with the International Council for Science (ICSU) and held in Budapest in 1999 paid special attention to issues of ethical principals and responsibilities in scientific practice. Participants decided to draw up a study of international declaration on ethics in science focusing on the code of ethics of scientist conduct which should be submitted in 2007.