

**Third Meeting
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Item 5 of the provisional agenda

**Consideration of the content, promulgation, and
adoption of codes of conduct for scientists**

**UNITED KINGDOM EXAMPLES OF CODES OF CONDUCT AND ASSOCIATED
ACTIVITIES RELATED TO GOVERNMENT SCIENCE**

Prepared by the United Kingdom

Introduction

1. For the purposes of this paper the term 'Government Science' is used to encompass scientific work that is funded in part or whole by the Government or conducted by one of its Departments or other agencies.
2. It is important to note that all science conducted in the UK is subject to UK legislation and regulations. Thus, in relation to biological and toxin weapons, the most important are the Biological Weapons Act 1974, the Chemical Weapons Act 1996, the Anti-Terrorism, Crime and Security Act 2001, and the Export of Goods, Transfer of Technology and Provision of Technical Assistance (Control) Order 2003 (implemented under the Export Control Act 2002). Each area of Government Science has its own specific requirements in terms of how the science is conducted and best practice measures appropriate for the particular scientific discipline.
3. As demonstrated in the Meeting of Experts in 2003, the UK regulatory framework is comprehensive. The UK recognises that some States are more highly governed than others in terms of the types and number of laws, regulations, and guidelines related to the conduct of science within their territory. In the UK important adjuncts to the legislative measures are contained in a number of codes relevant to UK Government Science. As such, this working paper is intended to highlight issues which the UK believes are of relevance to the discussions on codes of conduct for scientists. It provides some examples of codes and associated activities relevant to Government Science. This paper is not intended to be prescriptive or exhaustive.

The UK recognises that during the Meeting of Experts the discussions may highlight issues which may require further consideration.

The Civil Service Code

4. Most of the scientists in government departments and some staff in government agencies are civil servants. The Civil Service Code establishes the constitutional framework within which all civil servants work in the UK. Among other things, the Civil Service Code recognises the duty to comply with the law, including international law and treaty obligations and forms part of the terms and conditions of employment. This provides an overall standard which does not explicitly refer to the BTWC, but does make clear that UK civil servants are required to comply with the law. The Civil Service Code is an example of a code that does not explicitly mention 'science' or the BTWC, but is obviously significant for scientists undertaking work on behalf of the Government. It may be appropriate for a code of conduct for scientists to refer to such an overarching code.

Office of Science and Technology

5. Within the Office of Science and Technology (OST) there is recognition of the relationship between national and international efforts in the area of codes of conduct and ethical codes in science. In 2004 the Chief Scientific Adviser to the Government, Sir David King, convened a small working group to consider the issues around developing a universal ethical code of conduct for scientists. The working group agreed that it would be most useful to develop a set of guidelines that would:

- i Have an educational role, raising awareness among scientists and the public of the ethical and professional responsibilities of scientists;
- ii Capture a small number of broad principles that are shared across disciplinary and institutional boundaries, so that it would be relevant to anyone whose work uses scientific methods including social, natural, medical, and veterinary science, engineering and mathematics;
- iii Be adopted voluntarily by individual scientists and scientific institutions. Many scientific institutions already have codes of conduct and ethical frameworks in place, generally specific to the interests and needs of that institution. A set of guidelines would not seek to replace institutions' own frameworks. Rather, it would describe principles common to the practice of all good science that institutions would be encouraged to adopt and integrate into their own structures, thus supporting and encouraging individual scientists to reflect on the guidelines as part of their normal work.

6. The product of the working group is the document 'Rigour, Respect and Responsibility: Good Practice Guidelines for Scientists'. It aims to 'foster ethical research, to encourage active reflection among scientists on the wider implications and impacts of their work, and to support constructive communication between scientists and the public on complex and challenging issues.'

7. The Council for Science and Technology (CST), the Government's top-level advisory body on strategic science and technology policy issues, has been asked to look at how the guidelines could be disseminated more widely and how, in practice, they could have a useful role. The CST is currently consulting on the guidelines. Within the UK and Europe the guidelines have already received high-level attention. Consultees include a wide range of respected bodies including research funders, universities, professional bodies, industry bodies, schools and colleges, and unions. The guidelines are also about to be piloted with a number of government departments and agencies.

The HPA Principles of Good Scientific Practice

8. The Health Protection Agency (HPA) provides an example of a UK Government agency which requires its staff to comply with principles of good scientific practice. It collaborates with a wide variety of organizations and individuals in the UK and worldwide on public health issues. Within its newly developed 'Principles of Good Scientific Practice' it is made clear that the HPA expects both its staff, and collaborators in receipt of HPA funding, to accept their responsibilities in safeguarding good scientific practice. Such practice is outlined in the Principles document, which explicitly includes a reference to biological, toxin, and chemical weapons.

9. The Principles note that HPA staff must not knowingly engage in research for the production, development, or promotion of biological, toxin, or chemical weapons. In addition, staff have a duty to take action to report possible contravention or attempted contravention of the national and international legal requirements related to biological, toxin, and chemical weapons. (The conventions, national laws and regulations are identified in a specific annex to the Principles.) Staff are required to be aware of and to comply with UK national laws. They have a responsibility to ensure the safety and security of knowledge, materials, and technology that could be used to breach current laws and regulations pertaining to biological, toxin, and chemical weapons. Staff of the HPA have a responsibility to satisfy themselves that the content of their work is not, nor can be perceived to be, prohibited by the BTWC or the CWC. In addition, they must ensure that any work carried out under their direction meet these criteria and that those working under their supervision understand the objectives and provisions of the BTWC and the CWC, as well as national laws and regulations relating to the implementation of these Conventions in the UK.

10. This HPA guide is comprehensive, covering among other things, ethics, health and safety, intellectual property, and scientific misconduct in addition to the references to biological and toxin weapons. Principles of Good Scientific Practice therefore serves as an example of a comprehensive approach encompassing scientific misconduct, good scientific practice, misuse of science (e.g. biological and toxin weapons), and activity in contravention of national and international legal obligations in the UK.

Research Councils

11. A major funder of science in the UK is the Research Councils of the United Kingdom, which are under the Statutory control of the Department of Trade and Industry (DTI), supported by the OST. In 1998 a joint statement by the Director General of the Research Councils and the Chief Executive of the UK Research Councils was made in relation to the avoidance of scientific

misconduct. The underlying principle was that the Research Councils, as employers of researchers and major funders of research and training in the UK, have a particular responsibility for ensuring good scientific practice and for ensuring also that where cases of scientific misconduct arise then their resolution is properly handled. There is a recognised need for appropriate devolution of responsibilities in this. For example, Universities and other research institutions should formulate and disseminate codes of good scientific practice for their own use, which should be binding on all the staff and be a key element in training schemes and curricula. Although this statement refers to scientific misconduct and makes no reference to the BTWC, it is a good example of expectations of devolved responsibility and individual and institutional responsibility for good scientific practice. This may be applicable in discussions about the individual responsibility of scientists to ensure that good scientific practice encompasses the principle of not knowingly misusing science for the production, development, promotion, or transfer of biological and toxin weapons.

Other departments and agencies

12. Other Government Departments, such as the Department for the Environment, Food and Rural Affairs (Defra) also fund Government Science. Defra, for example, allocates around £320 million annually on scientific programmes. Such work is carried out on behalf of the Department by its laboratory agencies, Research Council Institutes, universities and the private sector. A joint code of practice for research between the Biotechnology and Biological Sciences Research Council, Defra, the Food Standards Agency, and the Natural Environment Research Council requires all contractors applying for research funding to accept, and indicate their compliance with, the Code. The joint code has also been endorsed by the UK Devolved Administrations covering Northern Ireland, Scotland, and Wales.

13. The joint code is aimed at the quality of the research process and the quality of the science conducted under funding by the named organizations and research councils. It is an example of a code that does not explicitly refer to the BTWC, but it requires, among other things, adherence to the relevant health and safety legislation. In the case of research involving pathogenic organisms, for example, documentary evidence would be required relating to the laboratory health and safety and the procedures relating to the handling of samples and materials involved. There is, therefore, a complimentary relationship between different codes in existence in the UK.

14. The Defence Science and Technology Laboratory (Dstl) as a government defence agency is required to be aware, at both corporate and individual level, of the international treaties and national legislation that are relevant to its work. It recognises the importance of raising awareness and educating staff members in their responsibilities to ensure compliance of their work with the relevant treaties and legislation, and to minimise the likelihood of diversion of material or information for misuse. Awareness-raising activities extend to include staff of other companies with facilities co-located on relevant Dstl sites. All new Dstl staff members are briefed on the relevant treaties and legislation and on compliance issues as part of their induction training, and have annual refresher training that includes these topics. Dstl staff with experience on compliance with the BTWC and related legislation provide, where relevant, advice during the formulation of management and research plans on good practice in consideration of compliance requirements. The Dstl approach serves as an example of the role of awareness raising, of

inducting new staff, and on-going (annual) refresher training on the responsibility of scientists to ensure compliance with, and adherence to, national and international law.

15. The DTI contains within it the Export Control Organisation. It has a Compliance Code of Practice to promote effective compliance with the law relating to export controls. The Code makes explicit reference to the obligations of the UK to non-proliferation, including the BTWC. It serves as an example of how to raise awareness of legal commitments within the private sector via a code. Within other UK Government Departments and Agencies there are further examples of codes related to the conduct of science, for example a code of scientific excellence which relates to the Civil Service Code. Another example would be provisions in codes of conduct which give reference to scientific misconduct. In many cases the funding requirements of bodies within the UK now require explicit mechanisms to address any staff misconduct within the general rules of staff conduct.

Summary

16. Within the UK there are a variety of codes of conduct related to Government Science that could inform discussions at the Meeting of Experts in 2005. Many existing codes refer to scientific conduct and misconduct in terms of practice related to plagiarism, fraud, peer review, professional ethics, and good scientific practice. Consideration might be given to distinctions, if any, between scientific misconduct and misuse of science; or, how to incorporate misuse of science into existing codes, identified principles of scientific practice, or excellence in UK Government Science. More recent codes have explicitly identified prohibitions relating to biological and toxin weapons and the need to adhere to national and international law. Other codes have underlined the link to the overarching Civil Service Code in the UK and the requirement of civil servants to comply with national and international law. Some codes and associated activities offer examples of how to raise awareness of the prohibitions related to the BTWC both to outside agencies and the private sector, and within an organisation as part of staff induction and training. It is clear that a wide variety of codes related to scientific conduct and practice exist. In addition, in the UK many of these codes related to Government Science implicitly or explicitly refer back to the requirement to comply with national and international law. Codes of conduct are therefore an adjunct to legislation and regulations and not a substitute for them.
